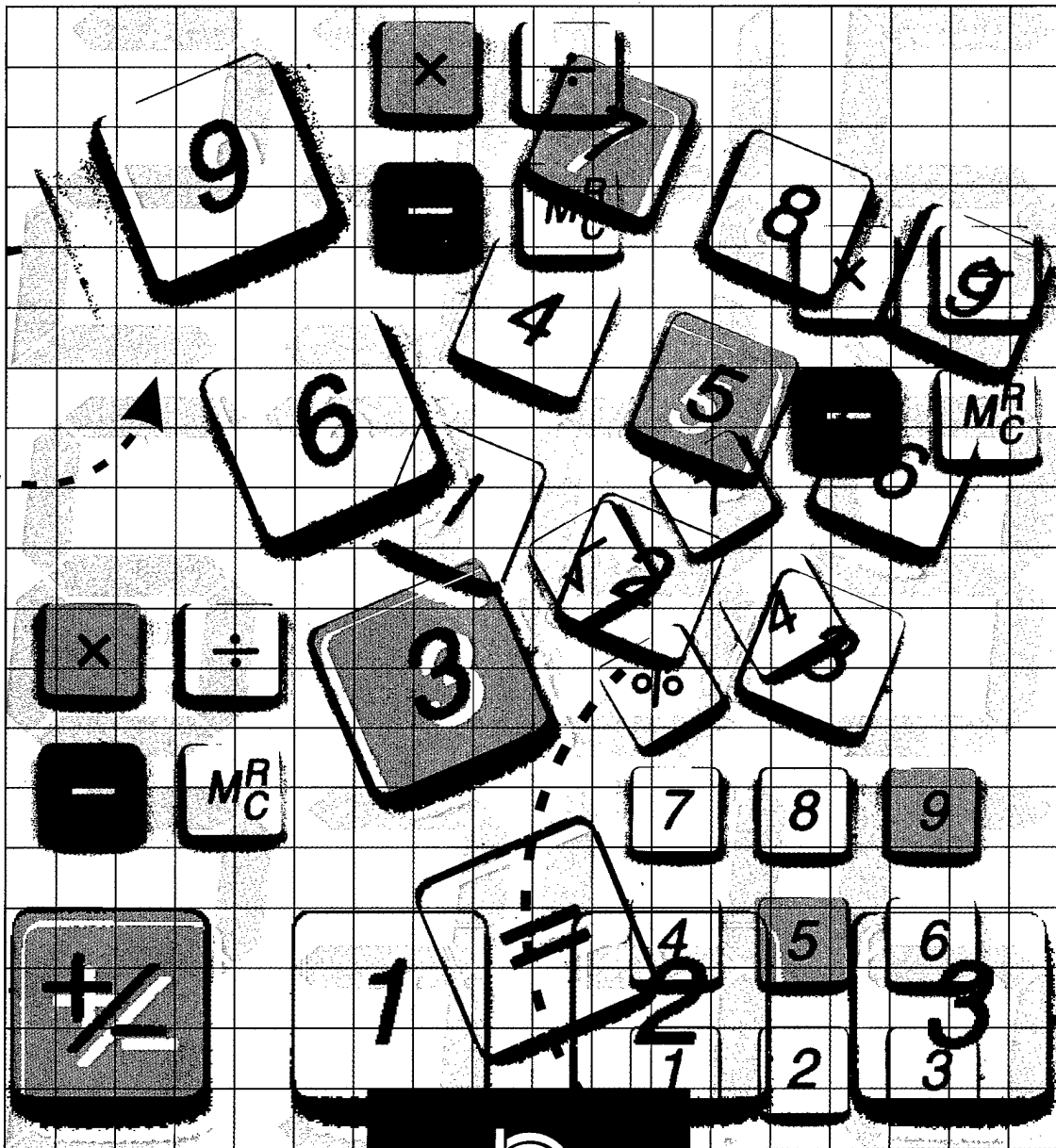


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The Economic and Budget Outlook

UPDATE

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AUGUST 1996

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**THE ECONOMIC AND BUDGET OUTLOOK:
AN UPDATE**

The Congress of the United States
Congressional Budget Office

NOTES

Unless otherwise indicated, all years referred to in Chapter 1 are calendar years and all years in Chapter 2 are fiscal years.

The economic outlook discussed in Chapter 1 is considered to be a forecast through the end of 1997 and a projection for 1998 through 2006. The forecast attempts to anticipate the cyclical movements in the economy and the effects of fiscal policy on the year-to-year changes in economic activity. The economic projection is designed to estimate the growth rates that will prevail on average for the entire period.

Unemployment rates throughout the report are calculated on the basis of the civilian labor force.

Numbers in the text and tables may not add to totals because of rounding.

Preface

This volume is one of a series of reports on the state of the economy and the budget that the Congressional Budget Office (CBO) issues each year. It satisfies the requirements of section 202(f) of the Congressional Budget Act of 1974 for CBO to submit periodic reports to the Committees on the Budget about fiscal policy and to provide baseline projections of the federal budget. In keeping with CBO's mandate to provide objective and impartial analysis, the report contains no recommendations.

The analysis of the economic outlook was developed by the Macroeconomic Analysis Division under the direction of Robert Dennis and John F. Peterson. Mr. Peterson also wrote Chapter 1. The Budget Analysis Division prepared the outlay estimates under the supervision of Paul N. Van de Water and Robert Sunshine. The revenue estimates were done by the staff of the Tax Analysis Division under the supervision of Rosemary D. Marcuss and Richard Kasten. James Horney wrote Chapter 2, with the assistance of Jeffrey Holland. Matthew Salomon and Laurie Brown are the authors of Appendix A, and Daniel Kowalski wrote Appendix B.

Paul L. Houts, Sherwood D. Kohn, and Christian Spoor edited the report. The authors owe thanks to Marion Curry, Dorothy Kornegay, and Linda Lewis, who assisted in the preparation of the report. Kathryn Quattrone prepared it for final publication.

June E. O'Neill
Director

August 1996

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Summary

The Congressional Budget Office (CBO) estimates that the deficit for fiscal year 1996 will be \$116 billion, \$28 billion lower than the amount that CBO projected last May and \$48 billion less than the deficit in 1995. The deficit will decline for the fourth straight year and will be at the lowest nominal level since 1981. At about 1.5 percent, it will probably also be the lowest as a percentage of gross domestic product since 1974. A \$22 billion increase in projected revenues in 1996--prompted primarily by unexpectedly high receipts reported after CBO had completed its May baseline--accounts for about 80 percent of the change in CBO's estimated deficit. At the same time, projected spending for the year is down by \$7 billion compared with the May estimates, further reducing the deficit.

The economy has grown somewhat faster and unemployment has been lower in the first half of this year than CBO had forecast, but the current outlook for the rest of 1996 and for 1997 is not significantly different from that described in May. CBO expects that real growth will average 2 percent a year from now through the end of 1997 and that unemployment will be moderately higher next year. Interest rates are expected to be lower in 1997 than they have been in recent months, and inflation will most likely remain near the current 3 percent average annual rate. Because little time has passed since CBO's May report, and because no major

news has emerged to alter the economic outlook, CBO has not prepared a new economic forecast. As a result, it has not revised its budget projections for 1997 through 2006.

It is not yet clear how the reduction in the 1996 deficit will affect the long-term budget projections. Much of the unexpected receipts may have resulted from factors that are unique to 1996, in which case projected revenues for 1997 and beyond would be little affected. On the outlay side, reductions in estimated 1996 disbursements for programs such as Medicaid appear to indicate a slowing in the growth of those programs; if so, that would imply a continuation of slower spending in future years. Lower spending in some other programs, however, may stem largely from shifts in timing that will result in higher spending in 1997 and little change thereafter.

It seems likely, however, that the 1997 deficit will be higher than the deficit in 1996. Under the policy changes embodied in the Congressional budget resolution that was adopted in June, and using economic assumptions published in May that are consistent with balancing the budget by 2002, CBO projects that the 1997 deficit will be \$155 billion. That figure will probably shrink somewhat as a result of the 1996 outcomes, but not by enough to erase the increase projected between 1996 and 1997.

The Economic Outlook

Although the outlook for the second half of 1996 and all of 1997 is similar to that forecast in May, the economy at midyear is stronger than the Congressional Budget Office (CBO) anticipated and interest rates are higher--factors that are reflected in the most recent *Blue Chip* forecast (see Table 1). Both real growth and interest rates are likely to be higher this year, and the unemployment rate lower, than CBO forecast in May in its *Economic and Budget Outlook: Fiscal Years 1997-2006*.

In spite of the economy's recent strength, CBO's May forecast for the last half of 1996 and for 1997--which anticipated average growth of 2 percent for those quarters--still seems reasonable. That growth rate is substantially lower than the 4.2 percent rate of the second quarter of 1996, but it is very close to the 2.1 percent rate that the past three quarters have averaged. With those growth rates, CBO expects a moderately higher average unemployment rate in 1997 than this year. Interest rates will most likely be lower in 1997 than they were in mid-1996, and inflation will remain near its current 3 percent rate.

The Outlook for Economic Growth

For the second half of this year and for 1997, the *Blue Chip* and the CBO forecasts for real (inflation-adjusted) growth in gross domestic product (GDP) are virtually the same--about 2 percent on average. Economists anticipate slower growth because some of the

recent growth stemmed from temporary developments and because a number of factors, such as a slowdown in investment for equipment, will tend to undermine future growth.

Developments During the Past Three Quarters

Trends in growth have been hard to pick out of the clutter of special factors affecting the performance of the economy in recent quarters. To understand those developments, it is useful to go back to the last quarter of 1995 when real growth reached only 0.3 percent. The shutdown of large parts of the federal government had depressed growth by about one-half of a percentage point, and a strike at Boeing had whittled growth by an additional one-quarter of a percentage point. The strike at Boeing ended in November, and although the federal shutdown lingered into January and was prolonged by a blizzard, it involved fewer people than in the fourth quarter of 1995. Despite a General Motors strike in February that partly offset those positive developments, growth picked up to 2 percent in the first quarter.

The end of both the General Motors strike and the federal shutdown boosted second-quarter growth. Without that bounce back, growth in the second quarter would have been about 2.7 percent instead of the preliminary estimate of 4.2 percent. Looking past those erratic quarterly changes, the average growth rate between the third quarter of 1995 and the second quarter of 1996 was 2.1 percent, roughly the same as CBO's estimate of the growth rate of potential GDP.

Table 1.
Comparison of Congressional Budget Office and *Blue Chip* Forecasts for 1996 and 1997

	Preliminary ^a 1995	Forecast	
		1996	1997
Fourth Quarter to Fourth Quarter (Percentage change)			
Nominal GDP			
CBO	3.8	5.0	4.7
<i>Blue Chip</i>	3.7	5.2	4.6
Real GDP ^b			
CBO	1.4	2.1	1.9
<i>Blue Chip</i>	1.3	2.6	1.9
Chain-Type GDP Price Index			
CBO	2.6	2.8	2.7
<i>Blue Chip</i>	2.6	2.5	2.6
CPI-U			
CBO	2.7	3.1	3.1
<i>Blue Chip</i>	2.7	3.1	3.0
Calendar Year Average (Percent)			
Real GDP Growth ^b			
CBO	2.1	2.0	1.9
<i>Blue Chip</i>	2.1	2.3	2.1
Unemployment Rate			
CBO	5.6	5.8	6.0
<i>Blue Chip</i>	5.6	5.5	5.6
Three-Month Treasury Bill Rate			
CBO	5.5	4.9	4.8
<i>Blue Chip</i>	5.5	5.1	5.2
Ten-Year Treasury Note Rate			
CBO	6.6	6.1	6.4
<i>Blue Chip</i>	6.6	6.5	6.5

SOURCES: Congressional Budget Office; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators* (July 10, 1996); Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTE: GDP = gross domestic product; CPI-U = consumer price index for all urban consumers.

a. CBO data consistent with the first official estimate for 1995, published on March 4, 1996.

b. Based on chained (1992) dollars.

A Look at Factors That Could Undermine Growth

In May, CBO discounted the possibility of rapid growth during the next two years for a number of reasons: the investment cycle for equipment was winding down; residential investment would slow in the face of higher interest rates and weak underlying demographics; inventories were still moderately large relative to sales; and the level of consumers' debt weakened the possibility that consumer spending would spark a boom. With the exception of the inventory-to-sales ratio, those factors still prevail.

The Investment Cycle for Equipment. Investment spending for plant and equipment, which had been a strong impetus to growth, is faltering. The growth of new orders for nondefense capital goods has fallen from the 10 percent to 15 percent pace that continued during much of 1994 and 1995. The level of new orders during the second quarter of this year is virtually unchanged from that during the last quarter of 1995. In addition, the rate of capacity use for manufacturing has fallen to around 82 percent from over 84 percent in early 1995, indicating less pressure to invest and expand capacity.

Housing Sales. Residential investment is also expected to dwindle, even though it was surprisingly vigorous during the first half of the year. Mortgage rates jumped sharply in March and continued to climb through July, reducing the affordability of houses. Rates for conventional mortgages were about 7.2 percent last winter but are now about 8.3 percent. Sales of new houses have remained strong, however, and the construction of new houses accelerated during the first half of the year. Some of that recent spurt of activity may have been an effort to buy before even higher mortgage rates took hold.

In addition to the increase in mortgage rates, underlying demographic trends will dampen the demand for housing. The number of households in the group that tends to be first-time home buyers--households headed by people between the ages of 25 and 34--has been falling, and demographers project that the decline will continue through the end of the decade.

Consumers' Debt Levels. Household finances do not appear to be severely overburdened, but relatively high

levels of debt erode the probability of a surge in consumer spending. Consumer loan and home mortgage delinquency rates and personal bankruptcies have been climbing for the past year and a half, and the overall ratio of debt service to disposable income has risen. Some of the increase in delinquencies may be the result of lower credit standards by some card issuers, and some of the increase in the debt-to-income ratio may stem from the wider use of credit cards as cash. Nonetheless, consumption is more likely to follow the general growth of the economy than to spur overall growth.

Fiscal Policy. Fiscal policy for 1996 has been restrictive. The restraint this year could amount to 0.7 percent of potential GDP, as measured by the decline in the standardized-employment deficit, which is the deficit adjusted to eliminate the effects of the business cycle.

Inventories. One sector of the economy that appears much more promising than it did early this year is inventories. Investment in inventories slowed dramatically during the last quarter of 1995 and the first quarter of this year. The General Motors strike accounts for part of the slowdown, but inventories in general are lower relative to sales than they were in the last half of 1995. That change lessens the likelihood that firms will trim production in the near future because of excessive inventories.

Inflation and Growth in Labor Compensation

CBO's forecast in May indicated that inflation as measured by the consumer price index (CPI) would increase from about 2.8 percent in 1995 to about 3.1 percent by early 1997. That outlook was based on a delayed response of prices to the low unemployment rate of the past year and a half. Along with the mild increase in inflation, CBO anticipated a small hike in wages and more growth of nonwage benefits.

Although the growth of the CPI for the first half of this year is faster than that of last year, up to 3.5 percent from 2.8 percent, the underlying rate of inflation--inflation of nonenergy, nonfood items--has not picked up. In fact, the underlying rate of inflation has been

remarkably steady since early 1994. A largely temporary increase in energy prices accounted for the bulk of the increase in the CPI so far this year.

The benefit component of labor compensation has not accelerated either, but wages have begun to grow faster. Benefits, particularly for medical care, have grown surprisingly slowly for a few years now. Although not enough information exists to pinpoint the causes of that slower growth, firms have apparently been shifting their health plans to managed care plans such as HMOs. The growth in the employment cost index (ECI) for private-sector wages, however, notched up this year to a year-over-year rate for the second quarter of 3.3 percent, the highest since the first quarter of 1992. The ECI had been rising at a 2.9 percent rate throughout 1994 and 1995.

In spite of the signs that wages are growing faster, the lack of any pickup in the underlying rate for the CPI has led some analysts to question the usefulness of a commonly used indicator of inflation: the nonaccelerating inflation rate of unemployment, or NAIRU. The NAIRU--currently estimated by CBO to be about 5.8 percent--is the rate of unemployment that signals the degree of inflationary or disinflationary pressure. If unemployment remains below the NAIRU for an extended period, inflation is likely to rise eventually as the prices of relatively scarce supplies of labor, goods, and services are bid up. Conversely, an unemployment rate above the NAIRU points toward an eventual decline in inflation.

Analysts who feel the NAIRU is not useful argue that structural changes that cannot be adequately taken into account could affect the relationship between the unemployment rate and the pressures on prices. Those structural changes include shifts in the occupational, skill, or geographic composition of the supply and demand for labor; changing terms of trade between the United States and the rest of the world; and alterations in Social Security tax rates or other incentives to work or to hire. Since the effect of those changes on the relationship between the unemployment rate and inflation cannot be estimated, critics argue, the concept of the NAIRU is not useful.

Such arguments, however, are overstated. Although the NAIRU is an imprecise tool for forecasting inflation, structural changes in the economy occur

slowly, and the NAIRU estimates therefore do provide some information to policymakers. Inflation in the CPI may not yet be accelerating simply because an estimate of the NAIRU at 5.8 percent does not suggest much inflation anyway. The unemployment rate has averaged 5.6 percent for the past year and a half, only a little below the NAIRU.

Thus, CBO's estimate of the NAIRU implies only a very mild increase in inflation--namely, a rise in the underlying rate of only about 0.2 percentage points by the end of this year. But even that modest increase may be partially offset in the near term by the weakness in import prices, which have grown by less than the overall rate of inflation over the past three years.

Indeed, economists are raising many of the same concerns today about the predictive power of the NAIRU as they did early in 1989, when higher inflation failed to materialize even though the unemployment rate had been below contemporary estimates of the NAIRU for two years. In fact, between mid-1989 and mid-1990, inflation did rise by about three-quarters of a percentage point.

The Risks to the Forecast

Other than CBO's forecast, three near-term scenarios for the economy are in play. The most popular is that the recent 3 percent to 4 percent growth might continue through the end of this year, provoking sharply higher interest rates and, consequently, more sluggish growth by the end of 1997. Under a second scenario, growth could be high without provoking additional inflation. In that case, interest rates need not increase significantly, if at all. In the last scenario, the economy would suffer a recession, most likely in late 1997 if the Federal Reserve overreacts to a continuation of rapid growth during the rest of this year.

Rapid Growth with Higher Interest Rates

The Federal Reserve has not indicated any specific growth rate that, if exceeded, would trigger a tightening of monetary policy. But continued growth of 2½ per-

cent or more would most likely prompt the Federal Reserve to raise short-term interest rates. In July, the "central tendency" of the forecasts of the individual members of the Board of Governors and the Reserve Bank presidents, all of whom contribute to decisions on monetary policy, called for a slowing of growth in the last half of this year and clustered around a 2 percent growth rate for next year.

The Federal Reserve continuously monitors the economy for indications of higher inflation. Moreover, given that most analysts feel the economy is operating at a high rate of resource use, the Federal Reserve is particularly watchful now. If the economy manages to grow at a 2½ percent or even a 3 percent rate without any signs of inflation, the Federal Reserve may not tighten policy.

In CBO's view, however, higher inflation would almost certainly accompany growth greater than 2½ percent during the second half of this year. Therefore, such growth would probably result in significantly higher short-term rates in late 1996 and 1997 than CBO's May forecast indicated.

Higher Noninflationary Growth

At 65 months, this business-cycle expansion, which started in April 1991, has already outlasted all but two of the other eight postwar expansions. Nonetheless, the economy appears to be growing in an extraordinarily well-balanced way. Rising inflation, which has been the death knell for a number of previous expansions, has not yet occurred. Moreover, other imbalances that often crop up late in expansions--such as overbuilding in some sectors or balance-sheet problems for banks, corporations, or households--do not appear particularly worrisome.

Possibly, the restructuring of major segments of the U.S. economy over the past 10 years or so has provided the foundation for a higher sustainable level of GDP than CBO anticipates. The manufacturing sector clearly appears more flexible--it has adjusted swiftly to the recent episodes of unexpected slowdowns in final sales--and the growth of productivity in manufacturing has been robust even in the slowdowns. The banking sector also appears to be in good shape. Banks are well capitalized, and although terms of credit have been

firmed up this year, no signs are visible of the general tightening of credit that normally occurs late in an expansion.

The recent criticisms of the NAIRU could also support a higher level of sustainable GDP. If labor markets are less tight than CBO believes--in other words, if the NAIRU is lower than CBO has estimated--inflationary pressures may not build for some time. In that case, the economy could grow at a brisker clip than CBO anticipates over the next two years without inflation worsening. Once the unemployment rate slips below the lower estimate of the NAIRU, however, further growth would entail a risk of higher inflation.

CBO may also have underestimated the trend growth rate of the economy. A higher sustainable growth rate would be possible if growth in productivity has shifted to a higher trend rate. Yet little evidence exists that such a shift has occurred.

Recession

A recession could occur sometime during the forecast period if either some underlying weakness is already built into the economy or the Federal Reserve inadvertently tightens monetary policy too much in response to rapid growth this year. Some of the arguments that led to the widespread concern early this year about a recession are still germane. Fiscal policy has been restrictive; households' financial situation, though not severe, could restrain consumption; export growth could slip if foreign growth falters or because of the strength of the dollar over the past year; higher interest rates could soften residential investment; and business investment, already weakening, could collapse in the wake of the resulting slowdown in final sales.

However, such an outlook is most unlikely to materialize: few signs are visible of any of the imbalances that normally signal recessions. In addition, inventories, which play a big role in recessions, do not appear especially large right now.

A more likely scenario for a recession to develop would be that the current binge of growth sparks a sharp increase in interest rates during the second half of this year, leading to the common boom-to-bust pattern of many past recessions. Under that scenario, a reces-

sion could start by late 1997. In July, the *Blue Chip* survey, with 44 economists responding, reported that the odds of a recession starting this year are only 1 in 10, but the odds of recession starting in 1997 are better than 1 in 4.

The Medium-Term Outlook

In May, CBO estimated that the potential noninflationary growth rate of the economy is 2.1 percent, and that estimate was used in projecting the economy between 1998 and 2006. CBO believes that this estimate of potential is still reasonable. The average unemployment and CPI inflation rates consistent with such growth are 6 percent and 3 percent. Short- and long-term interest rates are projected to average 4.8 percent and 6.4 percent, respectively.

In addition to real growth, inflation, and interest rates, the level of tax bases such as profits and wages is important for budget projections. In May, CBO forecast that the growth in profits and wages would be slower than the growth in nominal GDP during 1996 and 1997. CBO's forecast of nominal GDP is virtually the same as that being forecast by the *Blue Chip*, but preliminary data for one of the major tax bases--corporate profits--are higher than CBO anticipated.

CBO assumed that corporate profits as a share of GDP would decline over the next decade. The decline was expected primarily because debt-service costs are forecast to climb, and partially because labor compensation as a share of GDP is expected to expand slightly. Rising debt-service costs are anticipated both because interest rates have generally risen since late 1993 and because firms are expected to take on more debt during the forecast period as the growth of corporate earnings slows. The resulting increase in debt service should crimp the growth in corporate profits.

Data from the national income and product accounts (NIPAs) for the first quarter of 1996 indicate far more profits than CBO had forecast--about \$45 billion more. The significance of those preliminary estimates is uncertain, however. The Commerce Department tallies economic growth in terms of both total growth in income and total growth in output. Although the two

measures should be the same, the source data are different and large discrepancies often occur.

Since mid-1995, a particularly large discrepancy has emerged between the two measures. The NIPA measure of the growth of total income in the economy since mid-1995 is almost a percentage point higher at an annual rate than the NIPA measure of the growth of total output.

The Commerce Department believes that its calculations of output are generally more accurate than its calculations of income, although there is no way to know whether the current case follows that general rule. Therefore the rapid growth in the income categories, including profits, is somewhat suspect. If the output side is more accurate, either profits or some other category of income will be revised downward. If the income side is telling the more accurate story, growth in revenues could be stronger than the CBO forecast anticipates. (See Appendix A for a discussion of how the statistical discrepancy between the two measures has affected past forecasts of incomes.)

The Administration's *Mid-Session Review* Forecast

The forecast underlying the Administration's *Mid-Session Review of the 1997 Budget*, published in July, reflects the changes to the near-term outlook that have occurred since CBO prepared its forecast earlier this year. Real GDP growth and interest rates are slightly higher in the Administration's forecast, and the unemployment rate is lower. For 1996, the Administration's forecast is closer to the current *Blue Chip* consensus than is CBO's forecast.

The Administration's forecast incorporates the effects of long-term deficit reduction. That is not a significant assumption when forecasting the remainder of 1996, and at this point major deficit reductions would be difficult to put in place before the middle of 1997. Nevertheless, the policy assumption is important for the longer-term forecast. CBO presented two sets of economic projections in May: one that assumed no change in current budgetary policies, and another--the balanced budget policy projection--that incorporated the eco-

Table 2.
Comparison of CBO's and the Administration's Forecasts Assuming
Balanced Budget Policy for 1995 Through 2006

	Preliminary ^a 1995	Forecast		Projected								
		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Calendar Year Average (Billions of dollars)												
Nominal GDP												
May CBO	7,248	7,584	7,946	8,333	8,745	9,177	9,631	10,108	10,608	11,133	11,684	12,261
Administration	7,246	7,596	7,952	8,360	8,783	9,233	9,701	10,196	10,713	11,257	11,831	12,430
Year over Year (Percentage change)												
Real GDP ^b												
May CBO	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Administration	2.0	2.2	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Chain-Type GDP Price Index												
May CBO	2.5	2.6	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Administration	2.5	2.4	2.6	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
CPI-U												
May CBO	2.8	2.8	3.1	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
Administration	2.8	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Calendar Year Average (Percent)												
Civilian Unemployment Rate												
May CBO	5.6	5.8	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Administration	5.6	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Three-Month Treasury Bill Rate												
May CBO	5.5	4.9	4.8	4.3	3.9	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Administration	5.5	4.9	4.5	4.3	4.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Ten-Year Treasury Note Rate												
May CBO	6.6	5.7	5.5	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Administration	6.6	6.2	5.6	5.2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Income Shares (Percentage of GDP)												
May CBO												
Corporate profits ^c	8.2	7.9	8.0	7.9	7.7	7.5	7.5	7.4	7.4	7.4	7.4	7.4
Personal income	84.2	84.4	84.1	84.0	84.0	83.9	83.7	83.7	83.7	83.7	83.7	83.8
Wage and salary disbursements	47.2	47.4	47.3	47.3	47.2	47.2	47.2	47.1	47.0	47.0	46.9	46.9
Administration												
Corporate profits ^c	8.3	8.6	8.8	8.7	8.7	8.8	8.7	8.6	8.5	8.4	8.4	8.4
Personal income	84.2	84.6	84.5	84.2	83.9	83.5	83.2	83.0	83.0	82.8	82.7	82.6
Wage and salary disbursements	47.2	47.4	47.8	47.9	48.0	48.0	48.0	48.0	48.0	47.9	47.8	47.8

SOURCES: Congressional Budget Office; Office of Management and Budget; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTE: GDP = gross domestic product; CPI-U = consumer price index for all urban consumers.

a. Consistent with the first official estimate for 1995, published on March 4, 1996.

b. Based on chained (1992) dollars.

c. Corporate profits (book) before tax.

conomic effects of eliminating the deficit by 2002. The balanced budget policy projections had slightly higher average growth and lower interest rates than the current-policy forecast.

The Administration's most recent forecast should be compared, therefore, with CBO's May balanced budget policy forecast (see Table 2). Because the Administration changed its long-run projections only slightly, the differences between the two agencies' long-term projections are similar to those presented in CBO's *Economic and Budget Outlook* in May. The Administration forecasts slightly higher real growth and a lower rate of CPI inflation than does CBO. But little difference exists in the average of short- and long-term interest rates, and the projections of the chain-type GDP price index are virtually the same.

The Administration has changed its projections of income shares, however, resulting in a tax base as a share of GDP that is significantly higher than CBO's projections. The Administration's forecast published with the budget already indicated a higher tax base than

had CBO, and the changes in the *Mid-Session Review* widen the difference for the early years in the 21st century.

The two income shares that are most important for revenue projections are corporate profits and wage and salary disbursements. Although it is still higher than CBO's assumptions, the Administration's current projection of corporate profits as a share of GDP is slightly lower--about 0.3 percentage points in 2002--than what it was assuming earlier this year. In addition, the Administration's current projection of wage and salary disbursements as a share of GDP is higher than what the Administration previously assumed by about 0.6 percentage points. Those two important categories of income are now assumed to total 56.6 percent of GDP in the Administration's projections for 2002, but only 54.5 percent of GDP in CBO's projections. The Administration's higher projections of those income shares add about \$200 billion to the projected tax base that is taxed at a relatively high rate. That adds roughly \$50 billion to projected revenues for 2002.

The Budget Outlook

In May, the Congressional Budget Office (CBO) projected a deficit of \$144 billion for 1996. That projection was low by recent standards--almost \$150 billion below the record high deficit of \$290 billion in 1992 and, at 1.9 percent of gross domestic product (GDP), well below the deficit of 2.8 percent of GDP reached in 1989, the peak year of the last business cycle. It now appears, however, that the 1996 deficit will be even lower. Based on actual receipts and outlays recorded since the May projections were completed and on additional information available since then, CBO projects that the deficit in 1996 will be \$116 billion, or about 1.5 percent of GDP.

Revenues Rose More Than Anticipated

Revenues are expected to total \$1,450 billion in 1996, \$22 billion higher than the level projected in May (see Table 3). The reestimate is largely the result of unexpectedly strong tax receipts in April. (Because April revenues were reported after the May baseline projections had been completed but before CBO's report went to press, they were noted in the report but not reflected in the projections).

Data needed to determine the cause of the April surprise will not be available for several months. It is clear, however, that the unanticipated April receipts took the form of tax payments other than withholding and that most of this increase in nonwithheld pay-

ments stemmed from final payments for 1995 instead of estimated payments for 1996.

Unexpectedly high capital gains realizations in 1995 may account for most of the additional receipts. The stock market was strong, and some investors who had hoped for a cut in the tax rate on capital gains may have given up waiting. If capital gains are the explanation, the 1996 increase would not imply any major change in projected revenues in later years. But if the increase reflects changes in other taxable incomes, projections of revenues for 1997 and beyond would probably be raised unless the increase in incomes proved temporary.

Growth of Outlays Slowed Slightly

CBO expects that outlays will total \$1,566 billion in 1996, \$7 billion less than was projected in May. Discretionary outlays are \$5 billion higher than previously projected, but mandatory outlays are \$12 billion lower.

The May report noted one source of change in the projections, although the estimates did not include its effects. The Omnibus Consolidated Rescissions and Appropriations Act of 1996 (OCRA) provided full-year appropriations for a number of agencies that had previously been funded on a temporary basis by a series of continuing resolutions. In addition, the law included supplemental appropriations and rescissions of previ-

ously appropriated funds for other agencies. OCRA was signed into law on April 26, 1996, after the baseline projections included in the May report had been completed. Compared with the May baseline projections, OCRA increased discretionary outlays for 1996 by about \$2 billion. In addition, the spending patterns observed so far this year suggest that spending for discretionary programs will be another \$3 billion higher than was projected in May. Projected defense spending by the Departments of Defense and Energy is up by over \$3 billion, but that increase is partially offset by a reduction of nearly \$1 billion in estimated nondefense discretionary spending.

Among the mandatory programs, the largest single reestimate is a \$4 billion reduction in Medicaid outlays. In May, CBO assumed that Medicaid outlays would grow by 7.5 percent this year, but through June the growth above last year's level was only 2.3 percent. The lower outlays may result in part from transient factors, such as lower unemployment, but it is likely that most of the reduction stems from significant changes in the operation of state Medicaid programs that will also reduce spending in 1997 and later years below what CBO previously anticipated.

CBO has also lowered its estimate of Medicare spending in 1996 by \$1 billion. The reestimate reflects

Table 3.
CBO's Budget Projections for Fiscal Year 1996 (In billions of dollars)

	May	August	Change
Revenues			
Individual income taxes	636	652	16
Corporate income taxes	169	170	1
Social insurance taxes	504	508	5
Excise taxes	52	54	2
Other	<u>67</u>	<u>65</u>	<u>-2</u>
Total	1,428	1,450	22
Outlays			
Discretionary	533	538	5
Mandatory			
Social Security	348	347	-1
Medicare	196	195	-1
Medicaid	96	92	-4
Other	<u>235</u>	<u>229</u>	<u>-6</u>
Subtotal	875	863	-12
Offsetting receipts	-75	-75	a
Net interest	<u>240</u>	<u>240</u>	<u>1</u>
Total	1,572	1,566	-7
Deficit	144	116	-28

SOURCE: Congressional Budget Office.

a. Less than \$500 million.

lower payments under the Supplementary Medical Insurance program (Part B of Medicare), which covers the costs of physicians and other nonhospital services. CBO now expects that Medicare spending in 1996 will be 9.9 percent above the 1995 level, compared with its earlier projection of 10.7 percent. That slight slowing in the growth of the program could carry over to 1997 and beyond.

In other mandatory spending, CBO has reduced its estimate of outlays for farm programs in 1996 by \$2.5 billion. A shift in outlays from 1996 to 1997 accounts for about \$1.5 billion of that reduction. April's farm bill requires the Department of Agriculture to make payments before the start of the 1997 fiscal year on October 1. CBO accordingly had assumed that all of the outlays would be recorded in fiscal year 1996. CBO now understands, however, that payments will probably be made near the end of September and that a significant amount of outlays from those payments will most likely be recorded in fiscal year 1997.

A lower rate of unemployment than CBO forecast in May has caused a drop in projected unemployment benefits. Lower unemployment has also reduced the caseload for the Food Stamp, child nutrition, and family support programs. Altogether, projected spending for those programs has shrunk by \$3 billion.

CBO has cut its estimate of the offsetting receipts that will be recorded in 1996 for the proceeds from recent auctions of portions of the electromagnetic spectrum by the Federal Communications Commission (FCC). CBO anticipates that a little over \$1 billion of the receipts that had been expected in 1996 will be shifted to 1997 because of challenges that are likely to delay the issuing of some licenses. In addition, although CBO and the Office of Management and Budget have agreed that the budget should record those receipts on a present-value basis, the *Monthly Treasury Statement* is still recording them on a cash basis (see Box 1).

Net interest payments in 1996 are projected to be almost \$1 billion higher than had been estimated in May. This reestimate is largely the result of interest rates that have been higher than assumed in the May baseline economic forecast, although that effect is partially offset by reduced borrowing needs resulting from a lower-than-expected 1996 deficit.

Box 1.

Accounting for Spectrum Auctions and Universal Telephone Service

In two areas--auctioning spectrum licenses and providing universal telephone service--budgetary practices adopted by both the Office of Management and Budget (OMB) and the Congressional Budget Office (CBO) have not yet been reflected in the monthly statements of the Department of the Treasury. If this difference continues, it could lead to confusion about the actual spending, revenues, and deficit of the federal government.

Some recent auctions by the Federal Communications Commission of the right to use portions of the electromagnetic spectrum allow winning bidders to pay for licenses on an installment basis. OMB and CBO have agreed that, consistent with the credit reform procedures enacted in 1990, the net present value of the required payments should be recorded in the budget at the time the license is issued. But the Treasury's monthly statements are still recording all receipts on a cash basis as received. Thus, even if CBO's (or OMB's) estimate of the licenses issued and cash received in 1996 is correct, there could be a significant difference between the estimate and the receipts reported in the final *Monthly Treasury Statement* in October. (CBO estimates that cash payments of about \$1 billion will be made in 1996, but that the net present value of payments due for licenses awarded both with and without installment terms is nearly \$4 billion.) Because OMB is committed to reporting installment payments on a net present-value basis, the actual spending and deficit for 1996 that will be reported in the President's budget next year may also be different from those reported by the Treasury.

The Telecommunications Act of 1996, enacted in February, calls for expanding a fund to provide universal access to telephone service. Although the receipts and expenditures of the fund do not pass through the federal government, they clearly would not exist except for action taken by it and thus are ultimately under its control. OMB and CBO therefore concluded that the transactions of the fund should be recorded in the budget as revenues and outlays. Those transactions include some that predate the Telecommunications Act and others that result from the act. Currently, however, the Treasury reports neither the spending nor the revenues of the fund in its monthly statements. Since outlays of the fund will closely match its revenues (both OMB and CBO estimate \$4 billion of each in 1996), however, that omission has little effect on the deficit.

Budget watchers have paid a good deal of attention to July's Supreme Court decision in *United States v. Winstar Corporation*. The Court held that the federal government breached contracts with three savings and loan institutions when it ceased to count supervisory goodwill toward regulatory capital requirements. As a result of that decision, the government could be liable for large damages to cover losses of those and other thrift institutions that are attributable to such breached contracts. Based on the likelihood that the Supreme Court would uphold the Circuit Court, which had ruled for the thrift institutions, CBO included \$9 billion in federal payments--\$1.5 billion in each year from 1997 through 2002--in its May baseline. Because lower courts will determine the actual damages that must be paid to the aggrieved parties, both the total cost to the government and the timing of the payments remain un-

certain. The first hearing to set damages will not take place until early next year, so no payments will be made in 1996. As yet, there is also no reason to change the estimated stream of payments in 1997 through 2002.

Comparing the Administration's Estimates with CBO's

The Administration's *Mid-Session Review of the 1997 Budget*, issued by the Office of Management and Budget (OMB) on July 16, estimates that the 1996 deficit will be \$117 billion, less than \$1 billion above CBO's current projection (see Table 4). CBO estimates, how

Table 4.
Comparison of CBO's Projections for Fiscal Year 1996 and the Administration's *Mid-Session Review*
(In billions of dollars)

	Administration	CBO	Difference
Revenues	1,453	1,450	-4
Outlays			
Discretionary			
Defense	267	268	1
Nondefense	274	270	-4
Subtotal	540	538	-3
Nondiscretionary			
Social Security	348	347	a
Medicare ^b	195	195	a
Medicaid	93	92	-1
Spectrum auction	-11	-4	8
Farm income stabilization	6	4	-2
Postal Service	a	-1	-1
Net interest	241	240	-1
Other	159	154	-4
Subtotal	1,030	1,028	-2
Total	1,570	1,566	-4
Deficit	117	116	-1

SOURCES: Congressional Budget Office; Office of Management and Budget, *Mid-Session Review of the 1997 Budget* (July 1996).

a. Less than \$500 million.

b. Excludes offsetting receipts from Medicare premiums.

Table 5.
CBO's Estimates of the Fiscal Year 1997 Budget Resolution Conference Agreement
(By fiscal year, in billions of dollars)

	1997	1998	1999	2000	2001	2002	Total, 1997-2002
CBO's May Baseline Deficit ^a	165	175	182	191	194	210	n.a.
Baseline Adjustments ^b	4	3	2	1	2	2	14
Adjusted Baseline	169	177	184	193	196	212	n.a.
Budget Resolution Changes							
Outlays							
Discretionary							
Freeze ^c	-10	-15	-34	-51	-75	-92	-276
Additional savings	<u>-1</u>	<u>-6</u>	<u>-5</u>	<u>-3</u>	<u>-5</u>	<u>-8</u>	<u>-29</u>
Subtotal	-11	-21	-39	-54	-80	-100	-305
Mandatory							
Medicare	-7	-11	-21	-28	-38	-53	-158
Medicaid	d	-2	-7	-13	-20	-30	-72
Welfare reform	-3	-8	-9	-10	-11	-13	-53
Other	<u>-10</u>	<u>-6</u>	<u>-9</u>	<u>-12</u>	<u>-12</u>	<u>-14</u>	<u>-62</u>
Subtotal	-19	-27	-46	-63	-81	-109	-344
Net interest	d	-2	-4	-8	-14	-23	-50
Total Outlays	-31	-49	-88	-125	-175	-232	-700
Revenues	<u>17</u>	<u>18</u>	<u>21</u>	<u>21</u>	<u>20</u>	<u>15</u>	<u>112</u>
Total Budget Resolution Changes	-14	-31	-67	-104	-155	-217	-588
Resulting Deficit	155	146	117	88	41	-5	n.a.

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

- a. Deficits were projected using economic assumptions that are consistent with achieving a balanced budget by 2002. The projections assume that discretionary spending is equal to 1996 appropriations enacted before April 26, 1996, adjusted for inflation up to the statutory caps that are in effect through 1998.
- b. The baseline is adjusted for legislation enacted after the May baseline was completed (primarily the Omnibus Consolidated Rescissions and Appropriations Act of 1996, or OCRA), a correction in projected spending for subsidized housing, and a change in accounting for student loan subsidy costs.
- c. Savings from freezing discretionary budget authority at the dollar level provided in 1996. Both the inflated baseline and the freeze include the budget authority provided by OCRA and the outlays flowing from that budget authority, but the budget authority provided by OCRA is not projected into future years in either the baseline or the freeze.
- d. Less than \$500 million.

ever, that both revenues and outlays will be nearly \$4 billion lower than OMB projects.

CBO estimates that discretionary spending will be \$3 billion less than that projected by OMB. CBO's \$1 billion higher estimate of defense discretionary spending (largely for nuclear weapons activities of the Department of Energy) is more than offset by \$4 billion in lower nondefense discretionary outlays.

CBO's estimate of total mandatory spending is also slightly below OMB's. The largest single difference is in the estimate of offsetting receipts from FCC spectrum auctions that will be recorded in 1996. OMB estimates that receipts for licenses that will be issued in 1996 will exceed \$11 billion on a net present-value basis. CBO believes that delays in issuing some licenses will hold the 1996 receipts below \$4 billion. Differences in estimates of other mandatory programs are individually small but in total more than offset the difference in estimates of spectrum sales.

Action on the 1997 Budget

The Congressional budget resolution for fiscal year 1997 (House Concurrent Resolution 178), adopted in June, assumes the enactment of legislation that would lead to a balanced budget by 2002. The necessary savings are to be achieved by keeping discretionary spending near the 1996 level; holding spending for Medicare, Medicaid, welfare, and other mandatory programs below the levels projected under current law; and selling some federal assets (see Table 5). Those savings are partially offset by proposed tax cuts. The budget resolution also assumes that eliminating the deficit will yield economic benefits in the form of lower interest rates and slightly higher real growth.

For 1997, the budget resolution assumes \$11 billion in outlay savings (compared with the statutory caps) from holding discretionary appropriations to the 1996 enacted level. Targeted savings in mandatory spending would be almost completely offset by proposed tax cuts. The Congress is well on its way to achieving the planned discretionary savings. The House has cleared all 13 appropriation bills, and conference committees have reached agreements on four of them. With one important exception, however, action has yet to be taken on most of the reductions in mandatory spending and taxes contemplated in the budget resolution.

Just before its August recess, the Congress completed action on legislation to reform the welfare system, increase portability and make other changes in health insurance, and raise the minimum wage and provide tax relief to small businesses. The welfare reform bill (officially the Personal Responsibility and Work Opportunity Reconciliation Act) would reduce the deficit by \$55 billion over the 1997-2002 period; only \$3 billion of those savings, however, would occur in 1997. The Health Insurance Portability and Accountability Act would reduce the deficit by \$5 billion over the six-year period but by only a negligible amount in 1997. The Small Business Job Protection Act would have virtually no net effect on the deficit either in 1997 or over the next six years. (See Table B-2 in Appendix B for the effects of other recent legislation on the deficit.)

CBO projects a deficit of \$155 billion for 1997 under the policies of the budget resolution and CBO's May economic and other estimating assumptions. To some extent, the factors that have caused receipts to be higher than expected and outlays to be less than expected in 1996 will work to reduce the 1997 deficit as well. They are not likely to be large enough, however, to prevent the 1997 deficit from rising above the 1996 level.

Appendixes

Evaluating CBO's Record of Economic Forecasts

Since the Congressional Budget Office (CBO) issued its first forecast in 1976, CBO has compiled a record of economic predictions that compares favorably with the track records of five Administrations and the consensus forecasts of a sizable sample of private-sector economists. Although the margin is slight, CBO's forecasts have generally been closer than the Administration's to the actual values of several economic indicators that are important for projecting the budget. Moreover, during the 13 years for which comparisons are possible, CBO's forecasts have been about as accurate as the average of the 50 or so forecasts that make up the *Blue Chip* consensus survey. Comparing CBO's forecasts with that survey suggests that when CBO's economic predictions missed the mark by a wide enough margin to contribute to sizable misestimates of the deficit, those errors probably reflected limitations that confronted all forecasters.

The foregoing conclusions echo the findings of previous studies published by the Congressional Budget Office and other government and academic reviewers. They emerge from an evaluation of the accuracy of short-term forecasts for four economic indicators: growth in real (inflation-adjusted) output, inflation in the consumer price index (CPI), interest rates on three-month Treasury bills in both nominal and real terms, and interest rates on 10-year Treasury notes and Aaa corporate bonds. In carrying out this evaluation, CBO compiled two-year averages of its forecasts for the four indicators and compared them with historical values as well as with the corresponding forecasts of

the Administration and the *Blue Chip* consensus. In addition to those economic indicators, a measure of taxable incomes--wage and salary distributions plus corporate profits--is examined and compared with Administration forecasts.

Both CBO and the Administration have tended to err toward optimism in their forecasts of real growth over a two-year horizon. In other words, the average forecast error for real growth was an overestimate. Both forecasts tended to underestimate the rise in inflation to its peak in the 1979-1981 period and the subsequent decline. The Administration has been more optimistic than CBO in forecasting interest rates; its average error has been an underestimate. Overall, the average errors in the Administration's two-year forecasts were slightly larger than in CBO's. Finally, CBO's forecasts appear to be about as accurate as those of the *Blue Chip* consensus over the period for which comparable *Blue Chip* forecasts are available (1982-1994).

The Congressional Budget Office's and the Administration's longer-term (five-year) projections of average growth in real output were generally optimistic, but CBO's errors were much smaller than the Administration's. For the longer-term projections of real gross national product, CBO's errors were only slightly larger on average than those in its short-term forecasts of real output. Again, CBO's projections were about as accurate as those of the *Blue Chip* consensus over the comparable period (1979-1991).

The differences among the three forecasts, however, are not large enough to be statistically significant. The small number of forecasts available for the analysis makes it difficult to distinguish meaningful differences in their performance from those that might arise randomly. Thus, the statistics presented here are not reliable indicators of the future performance of any of the forecasters.

Sources of Data for the Evaluation

Evaluating the Congressional Budget Office's forecasting record requires compiling the basic historical and forecast data for growth in real output, CPI inflation, interest rates, and taxable incomes. Although each of those series has an important influence on budget projections, an accurate forecast of the two-year average growth in real output is the most critical economic factor in accurately estimating the deficit for the upcoming budget year. Two-year average forecasts published in early 1995 and 1996 could not be included in this evaluation because historical values for 1996 and 1997 are, of course, not yet available.¹ The data were therefore compiled using forecasts published early in the years 1976 through 1994.

Selection of Historical Data

Which historical data to use for the evaluation was dictated by the availability of actual data and the nature of the individual forecasts examined. Although CBO, the Administration, and *Blue Chip* all published the same measure for real output growth, selecting a historical series was difficult because of periodic benchmark revisions of the actual data.² By comparison, not all of the forecasters published the same measures for CPI infla-

tion and interest rates, but the selection of historical data for those series was clear-cut.

Real Output Growth. Historical two-year averages of growth in real output were developed from calendar year averages of the quarterly, chain-type, annual-weighted indexes of real gross national product (GNP) and real gross domestic product (GDP) published by the Bureau of Economic Analysis (BEA). The fact that several real GNP and GDP series were discontinued because of periodic benchmark revisions meant that they were unsuitable historical series.

For example, during the 1976-1985 period, the three forecasters published estimates for a measure of growth in real GNP that were based on 1972 prices, the measure published by BEA at the time. In late 1985, however, BEA discontinued that 1972-dollar series and began to publish GNP on a 1982-dollar basis. As a result, an official series of values for GNP growth in 1972 dollars is not available for the years after 1984; thus, actual two-year average growth rates are not available to compare with the forecasts made in early 1984 and 1985. From 1986 to 1991, forecasters published estimates of growth in real GNP based on 1982 prices. BEA revised the benchmark again in the second half of 1991; it discontinued the 1982-dollar GNP and began to publish GNP on a 1987-dollar basis.³ Consequently, the historical annual series for 1982-dollar GNP is available only through 1990, and actual two-year average growth rates are not available for the forecasts made in early 1990 and 1991. The forecasters then published estimates of growth in real GDP on a 1987-dollar basis until 1995, when BEA made another switch, late in the year, to a chain-weighted measure of GDP. Therefore, the historical annual series for 1987-dollar GDP ends with the 1994 annual value, and actual two-year average growth rates are not available for the forecasts made in early 1994 and 1995.

By periodically updating the series to reflect more recent prices, BEA's benchmark revisions yield a measure of real output that is more relevant for analyzing contemporary movements in real growth. But the process makes it difficult to evaluate forecasts of real growth produced over a period of years for series that are subsequently discontinued. The difficulties pre-

1. The Clinton Administration adopted CBO's economic assumptions as the basis for its budget in early 1993. As a result, the errors for the early 1993 forecast are virtually the same for CBO and the Administration.

2. Before 1992, CBO, the Office of Management and Budget, and *Blue Chip* used gross national product to measure output. However, beginning in early 1992, all three forecasters began to publish forecasts and projections of gross domestic product instead.

3. When the 1992 benchmark was revised, GDP replaced GNP as the central measure of national output.

sented by periodic revisions of the data were avoided by using BEA's currently preferred measure of real GNP and GDP, the chain-type, annual-weighted index.⁴

CPI Inflation. Two-year averages of inflation in the consumer price index were calculated from calendar year averages of monthly data published by the Bureau of Labor Statistics. Before 1978, the bureau published only one consumer price index series, known today as the CPI-W (the price index for urban wage earners and clerical workers). In January 1978, however, it began to publish a second, broader consumer price index series, the CPI-U (the price index for all urban consumers). CBO's comparison of forecasts used both series.

Until 1992, the Administration published its forecasts for the CPI-W, the measure used to index most of the federal government's expenditures for entitlement programs. By contrast, for all but four of its forecasts since 1979 (the exceptions were 1986 through 1989), CBO based its inflation forecast on the CPI-U, a more widely cited measure of inflation and the one now used to index federal income tax brackets. The *Blue Chip* consensus has always published its forecast of the CPI-U. Although both the CPI-U and CPI-W may be forecast with the same relative ease, and annual fluctuations in the two series are virtually indistinguishable, they differ in some years; for that reason, CBO used historical data for both series to evaluate the alternative forecast records.

Interest Rates. Two-year averages of nominal short- and long-term interest rates were developed from calendar year averages of monthly data published by the Board of Governors of the Federal Reserve System.

The forecasts of short-term interest rates were compared using historical values for two measures of the interest rate on three-month Treasury bills: the new-issue rate and the secondary-market rate. The Administration forecasts the new-issue rate, which corresponds to the price of three-month bills auctioned by the Treasury Department--that is, it reflects the interest actually paid on that debt. CBO forecasts the secondary-market rate, which corresponds to the price of the three-month bills traded outside the Treasury auctions. Because

such transactions occur continually in markets that involve many more traders than do Treasury auctions, the secondary-market rate provides an updated evaluation by the wider financial community of the short-term federal debt. *Blue Chip* has alternated between these two rates: it published the new-issue rate from 1982 to 1985, switched to the secondary-market rate for the 1986-1991 period, and then returned to the new-issue rate in 1992. Clearly, there is no reason to expect the two rates to differ persistently; indeed, the differences between their calendar year averages are minuscule.

The various forecasts of long-term interest rates were likewise compared using historical values for two measures of long-term rates: the 10-year Treasury note rate and Moody's Aaa corporate bond rate. A comparison of forecasts is only possible beginning in 1984 because not all of the forecasters published projections of long-term interest rates before that year. For forecasts made in early 1984 and 1985, CBO projected the Aaa corporate bond rate. Beginning with its early 1986 forecast, however, the Congressional Budget Office switched to the 10-year Treasury note rate. The Administration has always published its projection for the 10-year Treasury note rate, but *Blue Chip* has published the Aaa corporate bond rate.

Separate historical values for real short-term interest rates were calculated using the nominal short-term interest rate and inflation rate appropriate for each forecaster. In each case, the two-year average nominal interest rate was discounted by the two-year average rate of inflation. The resulting real short-term interest rates were very similar. Since there is no agreed-upon method for calculating real long-term interest rates, they were not included in the evaluation.

Taxable Incomes. Through its influence on the projection for federal government revenues, the forecast for taxable incomes plays a critical role in determining the accuracy of the deficit projection. The income measure examined here--wage and salary distributions plus the book value of corporate profits--combines the two sources of income to which tax receipts are most sensitive. Because the effective rate of corporate taxation does not differ very much from the effective rate of wage taxation (including both social insurance contributions and income taxes) and at the same time exceeds the effective rate of taxation of other income sources (such as interest income), it is appropriate to consider

4. For a discussion of the chain-type, annual-weighted index, see Congressional Budget Office, *The Economic and Budget Outlook: An Update* (August 1995), pp. 71-73.

those two sources together. This measure was chosen to facilitate comparing CBO's projections with those of the Administration. *Blue Chip* does not report sufficient detail about incomes to be included in the comparison.

Although the level of taxable incomes is the factor that most directly affects federal revenue, the substantial revisions that have been made to the historical estimates of those levels would severely distort a retrospective examination of projected errors in the levels of taxable incomes. As a result, the forecasts are presented here as changes in taxable incomes as a share of total income; the historical revisions, carried forward consistently to projections, should not affect projections of revenues. Moreover, taxable incomes as a share of total income is closer to the concept that macroeconomists consider when constructing their forecasts.

Sources of Forecast Data

The evaluation used calendar year forecasts and projections, which CBO has published early each year since 1976, timed to coincide with the publication of the Administration's budget proposals. The Administration's forecasts were taken from its budget in all but one case: the forecast made in early 1981 came from the Reagan Administration's revisions to President Carter's last budget. The corresponding CBO forecast was taken from CBO's published analysis of President Reagan's budget proposals. That forecast did not include the economic effects of the new Administration's fiscal policy proposals.

The average two-year forecasts of the *Blue Chip* consensus survey were taken from those published in the same month as CBO's forecasts. Because the *Blue Chip* consensus did not begin publishing its two-year forecasts until the middle of 1981, the first consensus forecast available for use in this comparison was published in early 1982. Average five-year projections, however, are published by *Blue Chip* only two or three times a year. All but one of its five-year projections used in this evaluation were published in March; the 1980-1984 projection was published in May.

Since 1985, the Congressional Budget Office has regularly included projections of economic profits and

wage and salary disbursements in *The Economic and Budget Outlook*. Because book profits more closely reflect the corporate profits tax base than do economic profits, forecasts of book profits were extracted from CBO's unpublished forecast files. Unpublished CBO forecasts are used for both profits and wages for the period from 1980 through 1984.

Measuring Forecast Performance

Following earlier studies of economic forecasts, this evaluation of CBO's forecasts focused on two aspects of their performance: statistical bias and accuracy.

Bias

The statistical bias of a forecast is the extent to which the forecast can be expected to differ from what actually occurs. CBO's evaluation used the *mean error* to measure statistical bias. That statistic--the arithmetic average of all the forecast errors--is the simplest and most widely used measure of forecast bias. Because the mean error is a simple average, however, underestimates and overestimates offset each other in calculating it. As a result, the mean error imperfectly measures the quality of a forecast--a small mean error would result if all the errors were small or if all the errors were large but the overestimates and underestimates happened to balance out.

Accuracy

The accuracy of a forecast is the degree to which forecast values are narrowly dispersed around actual outcomes. Measures of accuracy more clearly reflect forecast performance than does the mean error. This evaluation used two measures of accuracy. The *mean absolute error*--the average of the forecast errors without regard to arithmetic sign--indicates the average distance between forecasts and actual values without regard to whether individual forecasts are overestimates or underestimates. The *root mean square error*--calculated by first squaring all the errors, then taking the square root

of the arithmetic average of the squared errors--also shows the size of the error without regard to sign, but it gives greater weight to larger errors.

Measurement Issues

Those three statistics do not exhaust the available supply of measures of forecast performance. For example, to test for statistical bias in CBO's forecasts, studies by analysts outside CBO have used measures that are slightly more elaborate than the mean error. Those studies have generally concluded, as does this evaluation, that CBO's short-term economic forecasts do not contain a statistically significant bias.⁵

In addition, a number of methods have been developed to evaluate a forecast's efficiency. Efficiency indicates the extent to which a particular forecast could have been improved by using additional information that was at the forecaster's disposal when the forecast was made.⁶ The *Blue Chip* consensus forecasts represent a wide variety of economic forecasters and thus reflect a broader blend of sources and methods than can be expected from any single forecaster. The use of the *Blue Chip* forecasts in this evaluation can therefore be interpreted as a proxy for an efficient forecast. The fact that CBO's forecasts are about as accurate as *Blue Chip*'s is a rough indication of their efficiency.

5. Another approach to testing a forecast for bias is based on linear regression analysis of actual and forecast values. For details of that method, see J. Mincer and V. Zarnowitz, "The Evaluation of Economic Forecasts," in Mincer, ed., *Economic Forecasts and Expectations* (New York: National Bureau of Economic Research, 1969). That approach is not used here because of the small sample size. However, previous studies that have used it to evaluate the short-term forecasts of CBO and the Administration have not been able to reject the hypothesis that those forecasts are unbiased. See, for example, M.T. Belongia, "Are Economic Forecasts by Government Agencies Biased? Accurate?" *Review*, Federal Reserve Bank of St. Louis, vol. 70, no. 6 (November/December 1988), pp. 15-23.

6. For studies that have examined the relative efficiency of CBO's forecasts, see Belongia, "Are Economic Forecasts by Government Agencies Biased?"; and S.M. Miller, "Forecasting Federal Budget Deficits: How Reliable Are U.S. Congressional Budget Office Projections?" *Applied Economics*, vol. 23 (December 1991), pp. 1789-1799. Although both of the studies identify series that might have been used to make CBO's forecasts more accurate, they rely on statistics that assume a larger sample than is available. Moreover, although statistical tests can identify sources of inefficiency in a forecast after the fact, they generally do not indicate how such information can be used to improve forecasts when the forecasts are made.

More elaborate measures, however, are not necessarily reliable indicators when the sample of observations is small, such as the 19 observations that make up the sample of CBO's two-year forecasts. Small samples present three main types of problems for evaluating forecasts, including forecasts based on the simple measures presented here. First, small samples reduce the reliability of statistical tests that are based on the assumption that the underlying population of forecast errors follows a normal distribution. The more elaborate tests of forecast performance all make such an assumption about the hypothetical ideal forecast with which the actual forecasts are compared. Second, in small samples, individual forecast errors have a relatively large weight in the calculation of summary measures. The mean error, for example, can fluctuate in arithmetic sign when a single observation is added to a small sample. Third, the small sample means that CBO's forecast history cannot be used in a statistically reliable way to indicate either the direction or the size of future forecasting errors.

Apart from the general caution that should attend statistical conclusions based on small samples, there are several other reasons to view this evaluation of CBO's forecasts with particular caution. First, the procedures and purposes of CBO's and the Administration's forecasts have changed over the past 20 years and may change again in the future. For example, in the late 1970s, CBO characterized its long-term projections as a goal for the economy, whereas it now considers its projections to be what will prevail on average if the economy continues to reflect historical trends. Second, an institution's forecasting track record may not foretell its future abilities because of changes in personnel or methods. Finally, forecast errors increase when the economy is more volatile. All three forecasters made exceptionally large errors when forecasting for periods that included turning points in the business cycle.

CBO's Forecasting Record

This analysis evaluated the Congressional Budget Office's forecasts over two-year and five-year periods. The period of most interest for forecasters of the budget is two years. Because the Administration's and CBO's winter budget publications focus on the budget projection for the fiscal year beginning in the following Octo-

ber, an economic forecast that is accurate not only for the months leading up to the budget year but also for the budget year itself will provide the basis for a more accurate forecast of the deficit. A five-year horizon is used to examine the accuracy of longer-term projections of growth in real output.

Short-Term Forecasts

Historically, the Congressional Budget Office's two-year forecasts are slightly more accurate than the Administration's and suffer from slightly less statistical bias. In most cases, however, the differences are slight. Furthermore, CBO's forecasts are about as accurate as *Blue Chip's* average forecasts.

An accurate forecast of two-year growth in real output is the most important factor in minimizing errors when forecasting the deficit for the budget year. Accurate forecasts of nominal output, inflation, and nominal interest rates are less important for forecasting deficits now than they were in the late 1970s and early 1980s. The reason is that given current law and the level of the national debt, inflation increases both revenues and outlays by similar amounts. Revenues increase with inflation because taxes are levied on nominal incomes. Outlays increase because various entitlement programs are indexed to inflation and because nominal interest rates tend to increase with inflation, which in turn raises the cost of servicing the federal debt.⁷

Real Output Growth. For the two-year forecasts made between 1976 and 1994, CBO had a slightly better record than the Administration in forecasting growth in real output (see Table A-1). On average, both CBO's and the Administration's forecasts tended to be overestimates. CBO was closer to the true value in 11 of the 19 forecasts made between 1976 and 1994, the Administration was closer in five periods, and the two forecasters had identical errors in three periods. CBO's forecasts of real growth made between 1982 and 1994 were, on average, about as accurate as those of the *Blue Chip* consensus.

Forecast errors tend to be larger when the economy is more unstable. That tendency can be clearly seen in the forecasts of real GNP growth by comparing the large errors for 1979 through 1983--when the economy went through its most turbulent recessionary period of the postwar era--with the smaller errors recorded for later years. Similarly, the recent business cycle accounts for the large errors in the forecasts made in 1989 through 1991.

CPI Inflation. The records for forecasting the average annual growth in the consumer price index over a two-year period were very similar (see Table A-2). Both CBO and the Administration underestimated future inflation in their forecasts for 1977 through 1980, and both tended to overestimate it in their forecasts for 1981 through 1986. The average measures of bias and accuracy were virtually the same for CBO and the Administration. CBO was closer to the true value in seven of the 19 periods, the Administration was closer in eight periods, and the two forecasters had identical errors in four periods. For the 1982-1994 period, CBO's forecasts of inflation were about as accurate as those of both the Administration and *Blue Chip*.

Nominal Interest Rates. For the 1976-1994 forecasts, CBO's record was about as accurate as the Administration's for nominal short-term interest rates over a two-year period (see Table A-3). On average, the Administration tended to underestimate nominal short-term interest rates; CBO's mean error was zero over this period. CBO was closer to the true value in nine of the 19 periods, as was the Administration, and the two forecasters had identical errors in one period. However, for the 1982-1994 period, the root mean square error of CBO's forecasts was slightly above those of the Administration and *Blue Chip*, which means that CBO made a few relatively large errors (such as those in 1982 and 1983).

For the 1984-1994 forecasts of long-term interest rates, the Congressional Budget Office did significantly better than the Administration (see Table A-4). The Administration tended to underestimate rates and its mean error was larger than CBO's. In addition, the Administration's forecasts had a larger mean absolute error and root mean square error. CBO was closer to the true value in seven of the 11 periods, the Administration was closer in three periods, and the two forecasters had identical errors in one period.

7. Rules of thumb for estimating the effect on the deficit of changes in various macroeconomic variables are given in Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1997-2006* (May 1996), pp. 121-124.

The Congressional Budget Office's forecasts of long-term interest rates were about as accurate as those of the *Blue Chip* consensus. Both CBO and *Blue Chip* tended to overestimate long-term rates. CBO had a mean error of 0.2 percentage points compared with 0.3 percentage points for *Blue Chip*.

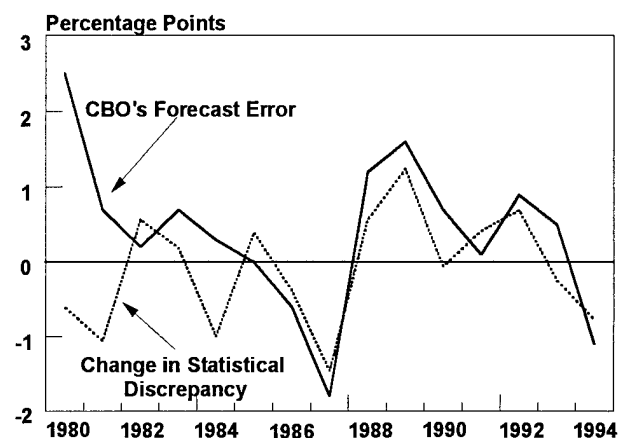
Real Short-Term Interest Rates. For the forecasts made in 1976 through 1994, CBO had a slight edge over the Administration in estimating real short-term interest rates (see Table A-5). Again, the Administration was more likely than CBO to underestimate interest rates, and its mean error was greater. The Congressional Budget Office and the Administration recorded similar mean absolute and root mean square errors. CBO's forecasts were closer to the actual value in 11 of the 19 periods, the Administration's were closer in seven, and the two had identical errors in one period. For forecasts made between 1982 and 1994, CBO's errors were generally similar in both direction and magnitude to those of the *Blue Chip* consensus.

Taxable Incomes. One of the largest sources of error in projections of the deficit derives from projections of taxable incomes. On average, both CBO and the Administration have been too optimistic in their projections of the major components of taxable incomes; both agencies have overstated the change in the share of book profits plus wages in output by about one-half of a percentage point (see Table A-6).

In general, the degree of overstatement was larger in the early 1980s than it has been recently. In part, that overstatement stems from legislation (the Accelerated Cost Recovery System, or ACRS, of the Economic Recovery Tax Act of 1981) that allowed corporations to shuffle income away from taxable categories (book profits) to nontaxable or tax-favored categories (capital consumption). As a result of legislation that could not have been predicted at the time the early forecasts were made, the profit share and hence the taxable incomes share was well below what it would have been in the absence of legislation.

Even after accounting for the ACRS, however, the errors are sizable. Unfortunately, it seems unlikely that this forecast record can be much improved. The errors in CBO's recent two-year projections of incomes are highly correlated with two-year changes in the sta-

Figure A-1.
CBO's Errors in Forecasting Two-Year Changes in Taxable Income Compared with Historical Two-Year Changes in the Statistical Discrepancy



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: CBO's forecast error is the difference between CBO's forecast of the two-year changes in taxable income as a share of output and the actual change over two years. The figure also shows the two-year actual change in the statistical discrepancy--the difference between the Bureau of Economic Analysis's estimates of incomes and production--as a share of output.

tistical discrepancy (see Figure A-1). The statistical discrepancy is the difference between the BEA's estimates of production and its estimates of incomes, a difference that is impossible to predict. In principle, income measured as the sum of its uses should equal income measured as the sum of its sources. However, because different data sources are used to estimate the uses and sources of income, substantial error creeps into the calculations, especially on the income side.

Longer-Term Projections

In projecting real GNP growth for the more distant future, measured here as five years ahead, the Administration's errors were larger than CBO's (see Table A-7). Although this comparative advantage for CBO does not directly affect the estimates of the deficit for the budget year, accuracy in the longer term is obviously important for budgetary planning over several years. Neither the

Administration nor CBO, however, considers its projections to be its best guess about the year-to-year course of the economy. The Administration's projections each year are based on the adoption of the President's budget as submitted, and for most years CBO has considered its projections to be an indication of the average future performance of the economy if major historical trends continue. Neither institution attempts to anticipate cyclical fluctuations in the projection period.

CBO's projections of longer-term growth in real GNP were closer than the Administration's to the actual value in 14 of the 16 periods. The Administration's projections showed an upward bias of 1.3 percentage points compared with an upward bias of 0.9 percentage point for CBO. Those biases occurred largely because

the projections made in early 1976 through 1979, which CBO and the Administration presented as target rates of growth, did not incorporate the recessions of 1980 and 1982. Through the subsequent years of expansion until the most recent recession, the upward bias was much smaller for the Administration's projections and even smaller for CBO's.

The size of the root mean square errors for the entire period for CBO and, to a lesser extent, for the Administration also resulted largely from errors in projections made during the first four years. CBO had a definite edge in the projections made in January 1980 through 1982 and a lesser edge in later years. Again, CBO's projections were about as accurate as those of the *Blue Chip* consensus over the comparable period.

Table A-1.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Growth Rates for Real Output (By calendar year, errors in percentage points)

	Actual			Chain-Type Annual- Weighted Index	CBO		Administration		Blue Chip	
	1972	1982	1987		Forecast	Error	Forecast	Error	Forecast	Error
	Dollars	Dollars	Dollars							
GNP										
1976-1977	6.7	4.8	4.8	5.3	6.2	0.9	5.9	0.7	a	a
1977-1978	5.2	5.0	4.7	4.9	5.5	0.6	5.1	0.2	a	a
1978-1979	3.9	3.9	3.8	4.1	4.7	0.7	4.7	0.7	a	a
1979-1980	1.3	1.1	1.1	1.5	2.7	1.3	2.9	1.4	a	a
1980-1981	1.1	0.9	0.5	1.0	0.5	-0.5	0.5	-0.5	a	a
1981-1982	0.2	-0.3	-0.4	0	2.1	2.2	2.6	2.7	a	a
1982-1983	0.7	0.5	0.7	0.8	2.1	1.3	2.7	1.9	2.0	1.2
1983-1984	5.2	5.2	4.9	5.3	3.4	-1.9	2.6	-2.7	3.5	-1.8
1984-1985	b	5.1	4.4	5.1	4.7	-0.3	4.7	-0.4	4.3	-0.8
1985-1986	b	3.0	2.8	3.1	3.3	0.2	3.9	0.8	3.2	0.1
1986-1987	b	3.1	2.9	2.8	3.1	0.3	3.7	0.9	3.0	0.2
1987-1988	b	3.9	3.5	3.3	2.9	-0.4	3.3	0	2.8	-0.5
1988-1989	b	3.5	3.3	3.6	2.4	-1.1	3.0	-0.6	2.1	-1.4
1989-1990	b	1.7	2.0	2.4	2.5	0.1	3.2	0.8	2.2	-0.2
1990-1991	b	c	0.3	0.2	2.0	1.9	2.8	2.6	1.9	1.8
1991-1992	b	c	0.7	0.8	1.6	0.9	1.4	0.6	1.2	0.4
GDP ^d										
1992-1993	b	c	2.7	2.5	2.6	0.1	2.2	-0.2	2.3	-0.1
1993-1994	b	c	3.6	2.9	2.9	0	2.9	0	3.0	0.2
1994-1995	b	c	e	2.7	2.8	0.1	2.9	0.2	2.8	0.1
Statistics for 1976-1994										
Mean error	*	*	*	*	*	0.3	*	0.5	*	*
Mean absolute error	*	*	*	*	*	0.8	*	0.9	*	*
Root mean square error	*	*	*	*	*	1.0	*	1.3	*	*
Statistics for 1982-1994										
Mean error	*	*	*	*	*	0.1	*	0.3	*	-0.1
Mean absolute error	*	*	*	*	*	0.7	*	0.9	*	0.7
Root mean square error	*	*	*	*	*	0.9	*	1.3	*	0.9

SOURCES: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are the two-year growth rates for real gross national product (GNP) and gross domestic product (GDP) last reported by the Bureau of Economic Analysis, not the first reported values. Forecast values are for the average annual growth of real GNP or GDP over the two-year period. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors are forecast values minus actual values; thus, a positive error is an overestimate. The chain-type, annual-weighted index of actual GNP or GDP was used in calculating the errors.

* = not applicable.

- Two-year forecasts for the *Blue Chip* consensus were not available until 1982.
- Data for 1972-dollar GNP and GDP are available only through the third quarter of 1985.
- Data for 1982-dollar GNP and GDP are available only through the third quarter of 1991.
- With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.
- Data for 1987-dollar GNP and GDP are available only through the second and third quarters, respectively, of 1995.

Table A-2.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Inflation Rates in the Consumer Price Index (By calendar year, errors in percentage points)

	Actual		CBO		Administration		Blue Chip	
	CPI-U	CPI-W	Forecast	Error	Forecast	Error	Forecast	Error
1976-1977	6.1	6.1	7.1	1.0	6.1	0	a	a
1977-1978	7.0	7.0	4.9	-2.1	5.2	-1.8	a	a
1978-1979	9.4	9.5	5.8	-3.7	6.0	-3.5	a	a
1979-1980	12.4	12.5	8.1	-4.3	7.4	-5.0	a	a
1980-1981	11.9	11.9	10.1	-1.8	10.5	-1.4	a	a
1981-1982	8.2	8.1	10.4	2.1	9.7	1.6	a	a
1982-1983	4.6	4.5	7.2	2.6	6.6	2.1	7.2	2.6
1983-1984	3.8	3.3	4.7	1.0	4.7	1.5	4.9	1.1
1984-1985	3.9	3.5	4.9	1.0	4.5	1.0	5.2	1.3
1985-1986	2.7	2.5	4.1	1.4	4.2	1.7	4.3	1.6
1986-1987	2.8	2.6	3.8	1.2	3.8	1.2	3.8	1.0
1987-1988	3.9	3.8	3.9	0.1	3.3	-0.5	3.6	-0.2
1988-1989	4.4	4.4	4.7	0.3	4.2	-0.2	4.3	-0.1
1989-1990	5.1	5.0	4.9	-0.1	3.7	-1.3	4.7	-0.4
1990-1991	4.8	4.6	4.1	-0.7	3.9	-0.7	4.1	-0.7
1991-1992	3.6	3.5	4.2	0.6	4.6	1.1	4.4	0.8
1992-1993	3.0	2.9	3.4	0.5	3.1	0.2	3.5	0.5
1993-1994	2.8	2.7	2.8	0.1	2.8	0.1	3.3	0.6
1994-1995	2.7	2.7	2.8	0.1	3.0	0.3	3.0	0.3
Statistics for 1976-1994								
Mean error	*	*	*	0	*	-0.2	*	*
Mean absolute error	*	*	*	1.3	*	1.3	*	*
Root mean square error	*	*	*	1.7	*	1.8	*	*
Statistics for 1982-1994								
Mean error	*	*	*	0.6	*	0.5	*	0.6
Mean absolute error	*	*	*	0.7	*	0.9	*	0.9
Root mean square error	*	*	*	1.0	*	1.1	*	1.1

SOURCES: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators*; Department of Labor, Bureau of Labor Statistics.

NOTES: Values are for the average annual growth of the consumer price index (CPI) over the two-year period. Before 1978, the Bureau of Labor Statistics published only one consumer price index series, now known as the CPI-W (the price index for urban wage earners and clerical workers). In January 1978, however, the bureau began to publish a second, broader consumer price index series, the CPI-U (the price index for all urban consumers). For most years since 1979, CBO forecast the CPI-U; from 1986 through 1989, CBO forecast the CPI-W. The Administration forecast the CPI-W until 1992, when it switched to the CPI-U. *Blue Chip* forecast the CPI-U for the entire period. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table A-3.

Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Interest Rates on Three-Month Treasury Bills (By calendar year, errors in percentage points)

	Actual		CBO		Administration		Blue Chip	
	New Issue	Secondary Market	Forecast	Error	Forecast	Error	Forecast	Error
1976-1977	5.1	5.1	6.2	1.1	5.5	0.4	a	a
1977-1978	6.2	6.2	6.4	0.2	4.4	-1.8	a	a
1978-1979	8.6	8.6	6.0	-2.6	6.1	-2.5	a	a
1979-1980	10.8	10.7	8.3	-2.4	8.2	-2.6	a	a
1980-1981	12.8	12.7	9.5	-3.2	9.7	-3.1	a	a
1981-1982	12.4	12.3	13.2	0.9	10.0	-2.4	a	a
1982-1983	9.7	9.6	12.6	3.0	11.1	1.4	11.3	1.6
1983-1984	9.1	9.1	7.1	-2.0	7.9	-1.1	7.9	-1.2
1984-1985	8.5	8.5	8.7	0.3	8.1	-0.4	9.1	0.5
1985-1986	6.7	6.7	8.5	1.8	8.0	1.3	8.5	1.8
1986-1987	5.9	5.9	6.7	0.9	6.9	1.0	7.1	1.2
1987-1988	6.2	6.2	5.6	-0.6	5.5	-0.7	5.7	-0.5
1988-1989	7.4	7.4	6.4	-0.9	5.2	-2.1	6.1	-1.2
1989-1990	7.8	7.8	7.5	-0.3	5.9	-1.9	7.5	-0.3
1990-1991	6.5	6.4	7.0	0.6	6.0	-0.4	7.1	0.7
1991-1992	4.4	4.4	6.8	2.4	6.2	1.8	6.4	2.0
1992-1993	3.2	3.2	4.7	1.5	4.5	1.3	4.6	1.4
1993-1994	3.6	3.6	3.4	-0.2	3.4	-0.2	3.8	0.2
1994-1995	4.9	4.9	3.9	-1.0	3.6	-1.3	3.6	-1.3
Statistics for 1976-1994								
Mean error	*	*	*	0	*	-0.7	*	*
Mean absolute error	*	*	*	1.4	*	1.5	*	*
Root mean square error	*	*	*	1.7	*	1.7	*	*
Statistics for 1982-1994								
Mean error	*	*	*	0.4	*	-0.1	*	0.4
Mean absolute error	*	*	*	1.2	*	1.2	*	1.1
Root mean square error	*	*	*	1.5	*	1.3	*	1.2

SOURCES: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators*; Federal Reserve Board.

NOTES: Values are for the geometric averages of the three-month Treasury bill rates for the two-year period. The actual values are published by the Federal Reserve Board as the rate on new issues (reported on a bank-discount basis) and the secondary-market rate. CBO forecast the secondary-market rate; the Administration forecast the new-issue rate. *Blue Chip* alternated between the two rates, forecasting the new-issue rate from 1982 to 1985, the secondary-market rate from 1986 to 1991, and the new-issue rate again beginning in 1992. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table A-4.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Long-Term Interest Rates (By calendar year, errors in percentage points)

	Actual		CBO		Administration		Blue Chip	
	10-Year Note	Corporate Aaa Bond	Forecast	Error	Forecast	Error	Forecast	Error
1984-1985	11.5	12.0	11.9	-0.1	9.7	-1.8	12.2	0.2
1985-1986	9.1	10.2	11.5	1.3	10.6	1.5	11.8	1.7
1986-1987	8.0	9.2	8.9	0.9	8.7	0.7	9.9	0.8
1987-1988	8.6	9.5	7.2	-1.4	6.6	-2.0	8.7	-0.8
1988-1989	8.7	9.5	9.4	0.7	7.7	-1.0	9.8	0.3
1989-1990	8.5	9.3	9.1	0.6	7.7	-0.8	9.5	0.3
1990-1991	8.2	9.0	7.7	-0.5	7.2	-1.0	8.7	-0.3
1991-1992	7.4	8.5	7.8	0.4	7.3	-0.1	8.7	0.3
1992-1993	6.4	7.7	7.1	0.7	6.9	0.5	8.4	0.7
1993-1994	6.5	7.6	6.6	0.2	6.6	0.2	8.2	0.6
1994-1995	6.8	7.8	5.9	-0.9	5.8	-1.0	7.1	-0.7
Statistics for 1984-1994								
Mean error	*	*	*	0.2	*	-0.4	*	0.3
Mean absolute error	*	*	*	0.7	*	0.9	*	0.6
Root mean square error	*	*	*	0.8	*	1.1	*	0.7

SOURCES: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators*; Federal Reserve Board.

NOTES: Actual values are for the geometric averages of the 10-year Treasury note rates or Moody's corporate Aaa bond rates for the two-year period as reported by the Federal Reserve Board. CBO forecast the 10-year Treasury note rate in all years except 1984 and 1985. The Administration forecast the 10-year note rate, but *Blue Chip* forecast the corporate Aaa bond rate. Data are only available beginning in 1984 since not all of the forecasters published long-term rate projections before then. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

Table A-5.

Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Real Interest Rates on Three-Month Treasury Bills (By calendar year, errors in percentage points)

	Actual				CBO		Administration		Blue Chip	
	New Issue		Secondary Market		Forecast	Error	Forecast	Error	Forecast	Error
	CPI-U	CPI-W	CPI-U	CPI-W						
1976-1977	-0.9	-0.9	-0.9	-0.9	-0.8	0.1	-0.6	0.3	a	a
1977-1978	-0.8	-0.7	-0.8	-0.7	1.5	2.2	-0.8	-0.1	a	a
1978-1979	-0.7	-0.8	-0.7	-0.8	0.2	1.0	0.1	0.9	a	a
1979-1980	-1.4	-1.5	-1.4	-1.5	0.2	1.7	0.7	2.2	a	a
1980-1981	0.8	0.9	0.7	0.8	-0.5	-1.2	-0.7	-1.6	a	a
1981-1982	3.8	4.0	3.7	3.9	2.6	-1.2	0.3	-3.7	a	a
1982-1983	4.8	4.9	4.7	4.9	5.0	0.3	4.2	-0.8	3.8	-1.0
1983-1984	5.1	5.7	5.1	5.6	2.2	-2.9	3.1	-2.6	2.9	-2.3
1984-1985	4.4	4.9	4.4	4.8	3.6	-0.8	3.4	-1.4	3.6	-0.8
1985-1986	3.9	4.1	3.9	4.1	4.2	0.3	3.6	-0.4	4.0	0.1
1986-1987	3.0	3.2	3.0	3.2	2.8	-0.4	3.0	-0.3	3.2	0.2
1987-1988	2.3	2.4	2.3	2.3	1.7	-0.6	2.1	-0.2	2.0	-0.3
1988-1989	2.8	2.9	2.8	2.9	1.7	-1.2	1.0	-1.9	1.8	-1.1
1989-1990	2.6	2.6	2.6	2.6	2.5	-0.2	2.1	-0.6	2.7	0.2
1990-1991	1.6	1.7	1.5	1.7	2.8	1.2	2.0	0.3	2.9	1.3
1991-1992	0.8	0.9	0.7	0.9	2.5	1.8	1.5	0.6	1.9	1.2
1992-1993	0.2	0.4	0.2	0.3	1.3	1.0	1.3	1.1	1.1	0.8
1993-1994	0.8	0.9	0.8	0.9	0.5	-0.3	0.6	-0.3	0.5	-0.4
1994-1995	2.1	2.2	2.1	2.1	1.0	-1.1	0.6	-1.5	0.5	-1.6
Statistics for 1976-1994										
Mean error	*	*	*	*	*	0	*	-0.5	*	*
Mean absolute error	*	*	*	*	*	1.0	*	1.1	*	*
Root mean square error	*	*	*	*	*	1.2	*	1.4	*	*
Statistics for 1982-1994										
Mean error	*	*	*	*	*	-0.2	*	-0.6	*	-0.3
Mean absolute error	*	*	*	*	*	0.9	*	0.9	*	0.9
Root mean square error	*	*	*	*	*	1.2	*	1.2	*	1.1

SOURCES: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators*; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTES: Values are for the appropriate three-month Treasury bill rate discounted by the respective forecast for inflation as measured by the change in the consumer price index. The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors are forecast values minus actual values; thus, a positive error is an overestimate.

CPI-U = consumer price index for all urban consumers; CPI-W = consumer price index for urban wage earners and clerical workers; * = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table A-6.

Comparison of CBO and Administration Projections of the Two-Year Change in Wage and Salary Distributions Plus Book Profits as a Share of Output (By calendar year, errors in percentage points)

	Actual	CBO		Administration	
		Forecast	Error	Forecast	Error
1980-1981	-3.1	-0.6	2.5	-1.3	1.8
1981-1982	-3.3	-2.6	0.7	-1.2	2.1
1982-1983	-1.9	-1.8	0.2	-1.7	0.3
1983-1984	-0.7	0	0.7	-1.0	-0.3
1984-1985	-0.5	-0.2	0.3	-0.2	0.4
1985-1986	-0.6	-0.6	0	-0.8	-0.2
1986-1987	1.6	1.0	-0.6	0.8	-0.8
1987-1988	2.7	0.9	-1.8	1.4	-1.3
1988-1989	-0.6	0.6	1.2	0.4	0.9
1989-1990	-1.2	0.4	1.6	0.7	1.9
1990-1991	-0.1	0.7	0.7	1.4	1.5
1991-1992	0	0.1	0.1	-0.1	0
1992-1993	0.1	1.0	0.9	1.4	1.2
1993-1994	0.1	0.5	0.5	0.5	0.5
1994-1995	1.3	0.2	-1.1	0.4	-0.9
Statistics for 1980-1994					
Mean error	*	*	0.4	*	0.5
Mean absolute error	*	*	0.9	*	0.9
Root mean square error	*	*	1.1	*	1.1

SOURCES: Congressional Budget Office; Office of Management and Budget; Department of Commerce, Bureau of Economic Analysis.

NOTES: The forecasts were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors are forecast values minus actual values; thus, a positive error is an overestimate. For the forecasts made between 1980 and 1991, gross national product was used in calculating the shares; for the forecasts made in 1992 and later, gross domestic product was used.

* = not applicable.

Table A-7.
Comparison of CBO and Administration Projections of Five-Year Average Growth Rates for Real GNP (By calendar year, errors in percentage points)

	Actual				CBO		Administration		Blue Chip	
	1972 Dollars	1982 Dollars	1987 Dollars	Chain-Type Annual-Weighted Index	Forecast	Error	Forecast	Error	Forecast	Error
1976-1980	4.2	3.4	3.3	3.7	5.7	2.0	6.2	2.5	a	a
1977-1981	3.1	2.8	2.6	3.0	5.3	2.3	5.1	2.1	a	a
1978-1982	1.6	1.4	1.2	1.6	4.8	3.2	4.8	3.2	a	a
1979-1983	1.3	1.0	1.1	1.4	3.8	2.4	3.8	2.5	3.1	1.7
1980-1984	2.1	1.9	1.7	2.0	2.4	0.4	3.0	1.0	2.5	0.5
1981-1985	b	2.6	2.4	2.8	2.8	0	3.8	1.0	3.0	0.2
1982-1986	b	2.7	2.6	2.9	3.0	0.1	3.9	1.0	2.7	-0.1
1983-1987	b	4.0	3.7	3.9	3.6	-0.3	3.5	-0.5	3.5	-0.5
1984-1988	b	4.1	3.7	3.9	4.0	0.1	4.3	0.4	3.5	-0.4
1985-1989	b	3.3	3.1	3.3	3.4	0.1	4.0	0.7	3.4	0.1
1986-1990	b	2.8	2.7	2.8	3.3	0.5	3.8	0.9	3.1	0.3
1987-1991	b	c	2.0	2.1	2.9	0.9	3.5	1.4	2.7	0.6
1988-1992	b	c	1.9	2.0	2.6	0.5	3.2	1.2	2.5	0.5
1989-1993	b	c	1.7	1.7	2.3	0.6	3.2	1.5	2.6	0.8
1990-1994	b	c	1.9	1.7	2.3	0.6	3.0	1.3	2.4	0.7
1991-1995	b	c	d	1.8	2.3	0.5	2.5	0.7	2.4	0.6
Statistics for 1976-1991										
Mean error	*	*	*	*	*	0.9	*	1.3	*	*
Mean absolute error	*	*	*	*	*	0.9	*	1.4	*	*
Root mean square error	*	*	*	*	*	1.3	*	1.6	*	*
Statistics for 1979-1991										
Mean error	*	*	*	*	*	0.5	*	1.0	*	0.4
Mean absolute error	*	*	*	*	*	0.5	*	1.1	*	0.5
Root mean square error	*	*	*	*	*	0.8	*	1.2	*	0.7

SOURCES: Congressional Budget Office; Office of Management and Budget; Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are for the five-year growth rates for real gross national product (GNP) last reported by the Bureau of Economic Analysis, not the first reported values. Projected values are for the average growth of real GNP over the five-year period. The majority of the projections were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors are projected values minus actual values; thus, a positive error is an overestimate. The chain-type, annual-weighted index of actual GNP was used in calculating the errors.

* = not applicable.

- a. Five-year forecasts for the *Blue Chip* consensus were not available until 1979.
- b. Data for 1972-dollar GNP are available only through the third quarter of 1985.
- c. Data for 1982-dollar GNP are available only through the third quarter of 1991.
- d. Data for 1987-dollar GNP are available only through the second quarter of 1995.

Sequestration Update Report for Fiscal Year 1997

Under current law, sequestration--the cancellation of budgetary resources--serves as the means to control discretionary appropriations and legislative changes in direct (that is, mandatory) spending and receipts.¹ The Congress and the President can avoid sequestration by keeping discretionary appropriations within established statutory limits and by making sure that the cumulative effect of legislation dealing with direct spending or receipts is deficit neutral in the current year and the budget year combined.

Federal law requires the Congressional Budget Office (CBO) each year to issue a sequestration preview report five days before the President submits a budget, a sequestration update report on August 15, and a final sequestration report 10 days after a session of Congress ends. Each sequestration report must contain estimates of the following items:

- o The current limits on discretionary spending and any adjustments to them; and
- o The amount by which legislation enacted since the Budget Enforcement Act of 1990 that affects direct spending or receipts has increased or decreased the deficit, as well as the amount of any required pay-as-you-go sequestration.

1. Current sequestration requirements were established by the Budget Enforcement Act of 1990, which amended the Balanced Budget and Emergency Deficit Control Act of 1985 and the Congressional Budget and Impoundment Control Act of 1974 to add new enforcement procedures for discretionary spending, direct spending, and receipts for fiscal years 1991 through 1995. The Omnibus Budget Reconciliation Act of 1993 extended the application of those procedures through 1998.

The final sequestration report must also include the amount of discretionary new budget authority for that fiscal year, estimated total outlays, and the amount of any required discretionary sequestration.

This update report to the Congress and the Office of Management and Budget (OMB) provides the required information.

Discretionary Sequestration Report

The Budget Enforcement Act (BEA) established discretionary spending limits for fiscal years 1991 through 1995 and provided for across-the-board cuts--known as sequestration--should annual appropriations breach the limits. The BEA also included specific instructions for adjusting those spending caps. The Omnibus Budget Reconciliation Act of 1993 (OBRA-93) set limits on total discretionary budget authority and outlays for fiscal years 1996 through 1998 and extended the existing enforcement procedures, including adjustments to the caps, for that period. Spending from the Violent Crime Reduction Trust Fund (VCRTF) was excluded from the caps by the Violent Crime Control and Law Enforcement Act of 1994, which created the trust fund. The act established separate limits through 1998 on budget authority and outlays for the VCRTF and lowered the discretionary caps each year by that amount.

CBO's current estimates of the limits on general-purpose (non-VCRTF) discretionary spending (shown in Table 1) differ from those in its sequestration preview report published in March, for two reasons. First, CBO revised the limits to reflect differences between the spending limits in its preview report and those in

OMB's preview report. Second, it increased the limits to account for emergency funds made available since OMB issued its preview report. The limits on VCRTF budget authority and outlays are not subject to any adjustment, so the amounts shown in Table 1 are the same as those CBO presented in March.

Table B-1.
CBO's Estimates of Discretionary Spending Limits for Fiscal Years 1996 Through 1998 (In millions of dollars)

	1996		1997		1998	
	Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
General-Purpose Spending Limits in CBO's March 1996 Preview Report	520,730	549,284	525,145	544,822	528,303	543,308
Adjustments						
Differences from OMB's March 1996 preview report						
Changes in budgetary concepts and definitions						
Reclassification of discretionary spending to mandatory spending	0	0	0	62	0	126
Changes to mandatory programs made in appropriation measures ^a	<u>0</u>	<u>0</u>	<u>161</u>	<u>375</u>	<u>33</u>	<u>4</u>
Subtotal	<u>0</u>	<u>0</u>	<u>161</u>	<u>437</u>	<u>33</u>	<u>130</u>
Inflation	0	0	0	0	520	312
Releases of contingent emergency spending	<u>0</u>	<u>5</u>	<u>0</u>	<u>-5</u>	<u>0</u>	<u>0</u>
Total Differences from OMB's March 1996 Preview Report	0	5	161	432	554	442
Emergency 1996 appropriations enacted since OMB's preview report	941	717	0	962	0	-206
Contingent emergency appropriations designated since OMB's preview report	521	382	0	87	0	30
Continuing disability reviews	<u>15</u>	<u>60</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Adjustments	1,476	1,164	161	1,482	554	266
General-Purpose Spending Limits as of August 15, 1996	522,206	550,448	525,306	546,304	528,857	543,574
Violent Crime Reduction Trust Fund Spending Limits	4,287	2,334	5,000	3,936	5,500	4,904
Total Discretionary Spending Limits	526,493	552,782	530,306	550,240	534,357	548,478

SOURCE: Congressional Budget Office.

NOTE: OMB = Office of Management and Budget.

a. Includes changes that resulted from sign errors in CBO's preview report.

Differences Between the Limits in CBO's and OMB's Preview Reports

The Budget Enforcement Act requires both CBO and OMB to calculate changes to the limits on discretionary spending that result from such factors as changes in budgetary concepts or new projections of inflation. However, OMB's estimates of the limits are the ones that determine whether enacted appropriations fall within the caps or whether a sequestration is required to eliminate a breach of them. CBO's estimates are merely advisory. In acknowledgment of OMB's statutory role, when CBO calculates changes in the spending limits for a sequestration report, it first adjusts for the differences between the limits in its most recent report and those in OMB's most recent report. In effect, CBO uses OMB's estimates as the starting point for the adjustments that it is required to make in the new report.

The numbers in the CBO and OMB March preview reports differed because of differing estimates of required adjustments to the spending caps. The largest discrepancy occurred in the category of adjustments that result from changes in budgetary concepts and definitions (see Table 1). CBO's estimate of that required adjustment in discretionary budget authority was lower than OMB's by \$161 million for 1997 and \$33 million for 1998. The resulting outlay adjustment was lower by \$437 million for 1997 and \$130 million for 1998. Some of the difference in outlays (\$62 million for 1997 and \$126 million for 1998) was caused by CBO's lower estimates of spending from the Department of Transportation's federal-aid highways account, which is classified as mandatory beginning in 1997. The rest of the difference in outlays and all of the difference in budget authority occurred because the two agencies have different estimates of the effects of changes to mandatory programs made in appropriation acts. Correcting for sign errors that appeared in CBO's preview report for that category of adjustment, CBO's estimates of required increases to the budget authority caps were lower than OMB's by \$73 million for 1997 and \$139 million for 1998. CBO's outlay adjustment was lower than OMB's by \$47 million for 1997 and \$30 million for 1998. Most of that estimating difference occurred in the wetlands and conservation reserve programs. In those programs, CBO expects smaller savings than OMB from acreage limitations contained in the 1996 agriculture appropriation bill.

Both CBO and OMB expect the rate of inflation (as measured by the implicit gross domestic product deflator) to be 2.7 percent in 1997. Therefore, the agencies agree on the size of the adjustment to the budget authority cap required to reflect changes in inflation estimates for 1997. They also agree on the outlay adjustment because they assumed the same rate of spending of appropriations. For 1998, however, CBO's estimate of inflation is lower than OMB's. As a result, CBO reduced its budget authority cap for 1998 by \$520 million more than OMB did and the outlay limit by \$312 million more than OMB.

The final difference between the estimates in the two preview reports occurred in adjustments for the release of contingent emergency appropriations. CBO increased the 1997 outlay cap by \$5 million more than OMB as a result of different estimated spending rates.

Emergency Funding Made Available Since OMB's Preview Report

As required by the Budget Enforcement Act, CBO has also adjusted the discretionary spending limits to reflect emergency appropriations enacted since OMB's preview report. Between March and August, the Congress enacted emergency appropriations and rescissions of emergency appropriations totaling a net of \$941 million in 1996 budget authority (see Table 1). The availability of a portion of those appropriations is contingent on their release by the President as emergency requirements. CBO includes the appropriations in its cap adjustment because no further action by the Congress is needed to make them available. Outlays from those emergency appropriations require increases of \$717 million and \$962 million in the outlay limits for 1996 and 1997, respectively, and a decrease of \$206 million in the limit for 1998.

In addition, CBO has adjusted the limits on discretionary spending for contingent emergency appropriations that the President released since the publication of OMB's preview report. That adjustment is necessary because CBO starts with the limits in OMB's previous report, and those limits (unlike CBO's) include adjustments only for such appropriations that have already been released by the President. Since OMB published its March report, the President has released \$521 mil-

lion in 1996 contingent emergency appropriations, which will increase outlays by \$382 million in 1996, \$87 million in 1997, and \$30 million in 1998 (see Table 1). Most of those appropriations are for spending that is related to severe weather and other natural disasters.

Additional Funding for Continuing Disability Reviews in the Social Security Program

The Contract With America Advancement Act of 1996 added a new cap adjustment for a portion of the Social Security Administration's discretionary spending that is used to verify the continued eligibility of beneficiaries under the Supplemental Security Income or Disability Insurance programs. The spending limits are adjusted only if annual appropriations are made for those continuing disability reviews, and only to the extent that the appropriations exceed \$100 million in new budget authority and \$200 million in outlays. The adjustment is the amount by which new budget authority and outlays exceed those amounts, subject to maximum adjustments set in statute. For 1996, the maximum applies. The increases of \$15 million in the limit on budget authority and \$60 million in the limit on outlays are reflected in the caps shown in Table 1.

Comparing Discretionary Spending Limits with the Congressional Budget Resolution

The total discretionary spending limits shown in Table 1 are significantly higher than the levels permitted by the Congress's 1997 budget resolution. For fiscal year 1997, the statutory spending limits are almost \$33 billion higher in budget authority and \$12 billion higher in outlays than the levels anticipated by the budget resolution. For fiscal year 1998, the caps exceed the amounts in the budget resolution by about \$41 billion in budget authority and \$22 billion in outlays.

Pay-As-You-Go Sequestration Report

A pay-as-you-go sequestration is triggered at the end of a Congressional session if legislated changes in direct spending programs or governmental receipts enacted since the Budget Enforcement Act increase the combined current and budget year deficits. In that case, nonexempt mandatory programs are cut by enough to eliminate the increase. The pay-as-you-go provisions of the BEA applied through fiscal year 1995, and OBRA-93 extended them through 1998.

The Budget Enforcement Act requires both CBO and OMB to estimate the net change in the deficit resulting from legislation that affects direct spending or receipts. As with the discretionary spending limits, however, OMB's estimates determine whether a sequestration is required. CBO has therefore adopted the estimates of changes in the deficit contained in OMB's sequestration preview report as the starting point for this report.

OMB's March preview report estimated that changes in direct spending and receipts enacted between the time of the Budget Enforcement Act and March 1 increased the combined 1996 and 1997 deficits by \$2,417 million. That estimate excludes changes in the deficit for 1996 through 1998 resulting from legislation enacted before OBRA-93 (the pay-as-you-go procedures did not apply to those years until OBRA-93 was enacted) and the deficit reduction contained in OBRA-93 itself (as required by law).

CBO's estimate of changes from legislation enacted since OMB's March report, when added to the amounts in that report, yields an increase in the combined 1996 and 1997 deficits of \$2,847 million (see Table 2). That figure includes the effect on the current year and budget year of all legislation that the Congress completed action on before its August recess—including welfare reform. Although CBO estimates that the legislation re-vamping the welfare system will significantly reduce the deficit in future years, the near-term effect is insufficient to offset the effects of other legislation.

Table B-2.
Budgetary Effects of Direct Spending or Receipt Legislation
Enacted Since the Budget Enforcement Act (By fiscal year, in millions of dollars)

Legislation	1996	1997	1998
Total for OMB's March 1996 Preview Report ^a	1,028	1,389	2,371
Legislation Enacted Since OMB's Preview Report			
Tax benefits for members of the armed forces			
performing peacekeeping functions (P.L. 104-117) ^b	38	45	0
Contract With America Advancement Act (P.L. 104-121) ^c	-6	-341	-491
Federal Agriculture Improvement and Reform Act (P.L. 104-127)	3,175	1,476	-691
Antiterrorism and Effective Death Penalty Act (P.L. 104-132) ^c	-2	-3	-1
Omnibus Consolidated Rescissions and Appropriations Act (P.L. 104-134) ^b	0	-4	-6
Relief of Benchmark Rail Group, Inc. (Private Law 104-1)	1	0	0
Taxpayer Bill of Rights II (P.L. 104-168) ^b	30	15	-7
Federal Oil and Gas Royalty Simplification and Fairness Act of 1996 (H.R. 1975) ^c	0	-1	-1
Health Insurance Portability and Accountability Act of 1996 (H.R. 3103) ^c	-52	-275	79
Small Business Job Protection Act of 1996 (H.R. 3448) ^c	-92	-579	279
Personal Responsibility and Work Opportunity Act of 1996 (H.R. 3734) ^c	0	-2,994	-8,386
Separation Incentive Payments for the Agency for International Development (H.R. 3870)	0	-1	0
Change in the Deficit Since the Budget Enforcement Act	4,120	-1,273	-6,854

SOURCE: Congressional Budget Office.

NOTES: OMB = Office of Management and Budget; P.L. = public law.

The following bills affected direct spending but did not increase or decrease the deficit by as much as \$500,000 in any year through 1998: the National Technology Transfer and Advancement Act (P.L. 104-113); the Cuban Liberty and Democratic Solidarity Act (P.L. 104-114); Greens Creek Land Exchange Act (P.L. 104-123); Federal Tea Tasters Repeal Act (P.L. 104-128); Mercury-Containing and Rechargeable Battery Management Act (P.L. 104-142); Trinity River Fish and Wildlife Management Reauthorization Act (P.L. 104-143); Amagansette National Wildlife Refuge Property Act (P.L. 104-148); Anticounterfeiting Consumer Protection Act (P.L. 104-153); Church Arson Prevention Act (P.L. 104-155); an act to exchange lands in Gilpin County, Colorado (P.L. 104-158); an act to extend most-favored-nation treatment to products from Bulgaria (P.L. 104-162); National Children's Island Act of 1995 (P.L. 104-163); an act to amend the Foreign Assistance Act of 1961 and the Arms Export Control Act (P.L. 104-164); an act to convey lands in Rolla, Missouri (P.L. 104-165); Relief of Nathan C. Vance (Private Law 104-2); Food Quality Protection Act of 1996 (P.L. 104-170); an act to extend most-favored-nation treatment to products from Romania (P.L. 104-171); an act to authorize minors to load materials into certain balers and compactors (P.L. 104-174); an act to repeal certain provisions relating to Federal employees contracting or trading with Indians (P.L. 104-178); Office of Government Ethics Authorization Act of 1996 (P.L. 104-179); Safe Drinking Water Amendments of 1996 (P.L. 104-182); War Crimes Act of 1996 (H.R. 3680).

a. Section 254 of the Balanced Budget and Emergency Deficit Control Act of 1985, as amended by the Budget Enforcement Act of 1990, calls for a list of all bills enacted since the Budget Enforcement Act that are included in the pay-as-you-go calculation. Because the data in this table assume OMB's estimate of the total change in the deficit resulting from bills enacted through the date of its report, readers are referred to the list of those bills included in Table 12-5 of the Budget Enforcement Act Preview Report contained in the *Budget of the United States Government, Fiscal Year 1997: Analytical Perspectives* (March 19, 1996) and in previous sequestration reports issued by OMB.

b. Change in receipts.

c. Change in outlays and receipts.

The bulk of the increase in CBO's estimate of changes in the 1996 and 1997 deficits comes from passage of the Federal Agriculture Improvement and Reform Act. CBO estimates that the act will increase spending in those years, whereas OMB estimates that it will decrease spending. The difference arises because the two agencies use different baselines for the 1996 crop year as the starting point for their analysis. Most aspects of the system of crop price support established by the 1990 farm bill expired at the end of 1995, so OMB assumed that payments for the 1996 crop year would be governed by the provisions of 1938 and 1949 agricultural acts. Those laws provided greater support to farmers than the 1990 act. Following the longstand-

ing practice of both agencies, CBO's baseline simply assumed continuation of the 1990 act, which led it to estimate increased outlays.

According to CBO's calculation, if the Congress did not reduce mandatory spending or increase receipts by a total of \$2,847 million before the end of the 104th Congress, mandatory accounts that are subject to an across-the-board reduction would face sequestration in 1997. A sequestration will not be required under OMB's figures, however, largely because of its estimate of the effects of the Federal Agriculture Improvement and Reform Act.

Glossary

This glossary defines economic and budgetary terms as they relate to this report. Some entries sacrifice precision for brevity and clarity to the lay reader. Where appropriate, sources of data for economic variables are indicated as follows:

- o BLS denotes the Bureau of Labor Statistics in the Department of Labor;
- o CBO denotes the Congressional Budget Office;
- o FRB denotes the Federal Reserve Board; and
- o NBER denotes the National Bureau of Economic Research.

adjustable-rate mortgage: Mortgage whose interest rate is not fixed for the life of the mortgage but varies in a predetermined way with movements in a specified market interest rate.

aggregate demand: Total purchases of a country's output of goods and services by consumers, businesses, government, and foreigners during a given period. (Bureau of Economic Analysis)

appropriation act: A statute under the jurisdiction of the House and Senate Committees on Appropriations that provides budget authority. Enactment generally follows adoption of authorizing legislation unless the authorization itself provides the budget authority. Currently, 13 regular appropriation acts are enacted each year. When necessary, the Congress may enact supplemental or continuing appropriations.

authorization: A substantive law that sets up or continues a federal program or agency. Authorizing legislation is normally a prerequisite for appropriations. For some programs, the authorizing legislation itself provides the authority to incur obligations and make payments.

Balanced Budget and Emergency Deficit Control Act of 1985: Also known as Gramm-Rudman-Hollings or the Balanced Budget Act, this law set forth specific deficit targets and a sequestration procedure to reduce spending if the targets were exceeded. The Budget Enforcement Act of 1990 established new budget procedures through fiscal year 1995 as well as revised targets, which exclude the Social Security trust funds. The Omnibus Budget Reconciliation Act of 1993 further extended various provisions of the Balanced Budget Act, without including fixed deficit targets beyond fiscal year 1995. See **discretionary spending caps** and **pay-as-you-go**.

baseline: A benchmark for measuring the budgetary effects of proposed changes in federal revenues or spending. As specified in the Budget Enforcement Act of 1990 (BEA), the baseline for revenues and entitlement spending generally assumes that laws now on the statute books will continue. The discretionary spending projections are based on the discretionary spending caps set by the BEA in 1995 through 1998. The *baseline with discretionary inflation* adjusts discretionary appropriations for inflation; the *baseline without discretionary inflation* does not.

Blue Chip consensus forecast: The average of about 50 economic forecasts surveyed by Eggert Economic Enterprises, Inc.

budget authority: Legal authority to incur financial obligations that will result in the spending of federal government funds. Budget authority may be provided in an authorization or an appropriation act. Offsetting collections, including offsetting receipts, constitute negative budget authority.

budget deficit: Amount by which budget outlays exceed budget revenues during a given period.

Budget Enforcement Act of 1990 (BEA): Title XIII of the Omnibus Budget Reconciliation Act of 1990. This act amended both the Congressional Budget Act of 1974 and the Balanced Budget and Emergency Deficit Control Act of 1985. The BEA provided for new budget targets, sequestration procedures, pay-as-you-go procedures, credit reform, and various other changes. The discretionary spending caps and the pay-as-you-go process were extended through 1998 by the Omnibus Budget Reconciliation Act of 1993. See **discretionary spending caps** and **pay-as-you-go**.

budget function: One of 20 areas into which federal spending and credit activity are divided. National needs are grouped into 17 broad budget functions, including national defense, international affairs, energy, agriculture, health, income security, and general government. Three functions--net interest, allowances, and undistributed offsetting receipts--do not address national needs but are included to complete the budget.

budget resolution: A resolution, passed by both Houses of Congress, that sets forth a Congressional budget plan for the next five years. The plan must be carried out through subsequent legislation, including appropriations and changes in tax and entitlement laws. The resolution sets guidelines for Congressional action, but it is not signed by the President and does not become law. The Congressional Budget Act of 1974 established a number of mechanisms that are designed to hold spending and revenues to the targets established in the budget resolution.

budgetary resources: All sources of budget authority that are subject to sequestration. Budgetary resources include new budget authority, unobligated balances, direct spending authority, and obligation limitations. See **sequestration**.

business cycle: Fluctuations in overall business activity accompanied by swings in the unemployment rate, interest rates, and profits. Over a business cycle, real activity rises to a peak (its highest level during the cycle), then falls until it reaches its trough (its lowest level following the peak), whereupon it starts to rise again, defining a new cycle. Business cycles are irregular, varying in frequency, magnitude, and duration. (NBER)

capacity constraints: Limits on the amount of output that can be produced without also significantly increasing prices. Causes of capacity constraints include shortages of skilled labor or of capital needed for production.

capacity utilization rate: The seasonally adjusted output of the nation's factories, mines, and electric and gas utilities expressed as a percentage of their capacity to produce output. Capacity is defined as the greatest output a plant can maintain with a normal work pattern. (FRB)

capital: *Physical capital* is the output that has been set aside to be used in production rather than consumed. According to the national income and product accounts, private capital goods are composed of residential and nonresidential structures, producers' durable equipment, and business inventories. *Financial capital* is the funds raised by an individual, business, or government by issuing securities, such as a mortgage, stock certificate, or bond. *Human capital* is a term for education, training, health, and other attributes of the workforce that increase its ability to produce goods and services.

central bank: A government-established agency responsible for conducting monetary policy and overseeing credit conditions. The Federal Reserve System fulfills those functions in the United States.

chain-type GDP price index: An overall measure of the price level in which the calculation of the change in prices uses the composition of output in adjoining years. This price index is currently set to equal one in 1992. Because this measure uses the composition of output in adjoining years, it is a more accurate measure of the way in which price change affects economic welfare than either the GDP implicit deflator or the fixed-weighted GDP price index. Compare with **implicit deflator** and **fixed-weighted price index**. (Bureau of Economic Analysis)

chained (1992) GDP: A measure of real economic output (economic output adjusted to remove the effects of inflation) in which prices in adjoining years are used to calculate the growth rate for total output. Chained (1992) GDP is set to equal nominal GDP in 1992. Because this measure uses prices in recent periods, it is a more accurate measure of real growth than traditional constant-dollar measures that use prices for a specific base year. See **gross domestic product (GDP)** and **constant dollar**. (Bureau of Economic Analysis)

civilian unemployment rate: Unemployment as a percentage of the civilian labor force--that is, the labor force excluding armed forces personnel. (BLS)

commercial paper: Short-term, unsecured debt obligations that are issued by large corporations with good credit ratings and that are actively traded in financial markets. By selling such obligations, issuers of commercial paper borrow directly from the public rather than indirectly through financial intermediaries such as commercial banks.

compensation: All income due to employees for their work during a given period. Compensation includes wages and salaries as well as fringe benefits and employers' share of social insurance taxes. (Bureau of Economic Analysis)

constant dollar: Measured in terms of prices of a base period to remove the effects of inflation. Compare with **current dollar**.

consumer confidence: A measure of consumer attitudes and buying plans indicated by an index of consumer sentiment. One such index is constructed by the University of Michigan Survey Research Center based on surveys of consumers' views of the state of the economy and their personal finances, both current and prospective.

consumer durable goods: Goods bought by households for their personal use that, on average, last more than three years--for example, automobiles, furniture, or appliances.

consumption: Total purchases of goods and services during a given period by households for their own use. (Bureau of Economic Analysis)

cost of capital: The total expected rate of return that an investment must generate in order to provide investors with the prevailing market yield consistent with risk after accounting for corporate taxes (if applicable) and depreciation.

countercyclical: Acting to moderate the ups and downs of the business cycle.

CPI-U: An index of consumer prices based on the typical market basket of goods and services consumed by all urban consumers during a base period--currently 1982 through 1984. (BLS)

credit crunch: A significant, temporary decline in the normal supply of credit, usually caused by tight monetary policy or a regulatory restriction on lending institutions.

credit reform: A revised system of budgeting for federal credit activities that focuses on the cost of subsidies conveyed in federal credit assistance. The system was authorized by the Federal Credit Reform Act of 1990, which was part of the Budget Enforcement Act of 1990.

credit subsidies: The estimated long-term costs to the federal government of direct loans or loan guarantees calculated on the basis of net present value, excluding administrative costs and any incidental effects on governmental receipts or outlays. For direct loans, the subsidy cost is the net present value of loan disbursements minus repayments of interest and principal, adjusted for estimated defaults, prepayments, fees, penalties, and other recoveries. For loan guarantees, the subsidy cost is the net present value of the estimated payments by the government to cover defaults and delinquencies, interest subsidies, or other payments, offset by any payments to the government, including origination and other fees, penalties, and recoveries. See **present value**.

currency value: See **exchange rate**.

current-account balance: The net revenues that arise from a country's international sales and purchases of goods and services, net international transfers (public or private gifts or donations), and net factor income (primarily capital income from foreign-located property owned by residents minus capital income from domestic property owned by nonresidents). The current-account balance differs from net exports in that it includes international transfers and net factor income. (Bureau of Economic Analysis)

current dollar: Measured in the dollar value--reflecting prices that prevailed then--of the period under consideration. Compare with **constant dollar**.

cyclical deficit: The part of the budget deficit that results from cyclical factors rather than from underlying fiscal policy. The cyclical deficit reflects the fact that, when GDP falls, revenues automatically fall and outlays automatically rise. By definition, the cyclical deficit is zero when the economy is operating at potential GDP. Compare with **standardized-employment deficit**. (CBO)

debt held by the public: Debt issued by the federal government and held by nonfederal investors (including the Federal Reserve System).

debt restructuring: Changing the characteristics, such as maturity or interest rate, of an entity's outstanding debt. Such changes can be effected by issuing long-term debt and retiring short-term debt (or vice versa), or by negotiating with creditors.

debt service: Payment of scheduled interest obligations on outstanding debt.

deflator: See **implicit deflator**.

deposit insurance: The guarantee by a federal agency that an individual depositor at a participating depository institution will receive the full amount of the deposit (up to \$100,000) if the institution becomes insolvent.

depository institutions: Financial intermediaries that make loans to borrowers and obtain funds from savers by accepting deposits. Depository institutions are commercial banks, savings and loan institutions, mutual savings banks, and credit unions.

depreciation: Decline in the value of a currency, financial asset, or capital good. When applied to a capital good, depreciation usually refers to loss of value because of obsolescence or wear.

direct spending: The Budget Enforcement Act of 1990 defines direct spending as (a) budget authority provided by an authorization, (b) entitlement authority (including mandatory spending contained in appropriation acts), and (c) the Food Stamp program. A synonym is **mandatory spending**. Compare with **discretionary spending**.

discount rate: The interest rate the Federal Reserve System charges on a loan that it makes to a bank. Such loans, when allowed, enable a bank to meet its reserve requirements without reducing its loans.

discouraged workers: Jobless people who are available for work but who are not actively seeking it because they think they have poor prospects of finding jobs. Because they are not actively seeking jobs, discouraged workers are not counted as part of the labor force or as being unemployed. (BLS)

discretionary spending: Spending for programs whose funding levels are determined through the appropriation process. The Congress has the discretion each year to determine how many dollars will be devoted to continuing current programs and funding new ones. Compare with **direct spending**.

discretionary spending caps: Annual ceilings through fiscal year 1998 on budget authority and outlays for discretionary programs defined in the Balanced Budget Act of 1985, as amended by the Budget Enforcement Act of 1990 and the Omnibus Budget Reconciliation Act of 1993. One cap covers appropriations from the Violent Crime Reduction Trust Fund. A separate cap covers all other (that is, general-purpose) discretionary spending. Discretionary spending caps are enforced through Congressional rules and sequestration procedures.

disposable (personal) income: Income received by individuals, including transfer payments, minus personal taxes and fees paid to government. (Bureau of Economic Analysis)

domestic demand: Total purchases of goods and services, regardless of origin, by U.S. consumers, businesses, and governments during a given period. Domestic demand equals gross domestic product minus net exports. (Bureau of Economic Analysis)

entitlements: Programs that make payments to any person, business, or unit of government that seeks the payments and meets the criteria set in law. The Congress controls these programs indirectly by defining eligibility and setting the benefit or payment rules. Although the level of spending for these programs is controlled by the authorizing legislation, funding may be provided in either an authorization or an appropriation act. The best-known entitlements are the major benefit programs, such as Social Security and Medicare. See **direct spending**.

excess reserves: Total monetary reserves in excess of required reserves. See **monetary reserves** and **reserve requirements**.

exchange rate: The number of units of a foreign currency that can be bought with one unit of the domestic currency. (FRB)

excise tax: A tax levied on the purchase of a specific type of good or service, such as tobacco products or telephone services.

expansion: A phase of the business cycle that extends from a trough to the next peak. See **business cycle**. (NBER)

federal funds: See **trust fund**.

federal funds rate: Overnight interest rate at which financial institutions borrow and lend monetary reserves. A rise in the federal funds rate (compared with other short-term rates) suggests a tightening of monetary policy, whereas a fall suggests an easing. (FRB)

Federal Open Market Committee (FOMC): The group within the Federal Reserve System that determines the direction of monetary policy. The open market desk at the Federal Reserve Bank of New York implements the policy with open market operations--the purchase or sale of government securities--which influence short-term interest rates

and the growth of the money supply. The FOMC is composed of 12 members, including the seven members of the Board of Governors of the Federal Reserve System and five of the 12 presidents of the regional Federal Reserve Banks.

Federal Reserve System: As the central bank of the United States, the Federal Reserve is responsible for conducting the nation's monetary policy and overseeing credit conditions.

final sales to domestic purchasers: Gross domestic product minus both net exports and the change in business inventories during a given period. (Bureau of Economic Analysis)

financial intermediary: An institution that indirectly matches borrowers with lenders. For example, depository institutions, such as commercial banks or savings and loan institutions, lend funds that they have accepted from depositors. Nondepository institutions, such as life insurance companies or pension funds, lend or invest funds that they hold in reserve against future claims by policyholders or participating retirees.

financing account: Any account established under credit reform to finance the portion of federal direct loans and loan guarantees not subsidized by federal funds. Since these accounts are used only to finance the nonsubsidized portion of federal credit activities, they are excluded from the federal budget and considered a means of financing the deficit.

fiscal policy: The government's choice of tax and spending programs, which influences the amount and maturity of government debt as well as the level, composition, and distribution of national output and income. An "easy" fiscal policy stimulates the short-term growth of output and income, whereas a "tight" fiscal policy restrains their growth. Movements in the standardized-employment deficit constitute one overall indicator of the tightness or ease of federal fiscal policy; an increase relative to potential gross domestic product suggests fiscal ease, whereas a decrease suggests fiscal restriction. The President and the Congress jointly determine federal fiscal policy.

fiscal year: A yearly accounting period. The federal government's fiscal year begins October 1 and ends September 30. Fiscal years are designated by the calendar years in which they end--for example, fiscal year 1996 began October 1, 1995, and will end on September 30, 1996.

fixed-weighted price index: An index that measures the overall price level (compared with a base period) without being influenced by changes in the composition of output or purchases. Compare with **implicit deflator** and **chain-type GDP price index**.

GDP: See **gross domestic product**.

GDP gap: The difference between potential real GDP and real GDP, expressed as a percentage of potential real GDP. See **potential real GDP**.

GNP: See **gross national product**.

government purchases of goods and services: Purchases from the private sector (including compensation of government employees) made by government during a given period. Government purchases constitute a component of GDP, but they encompass only a portion of all government expenditures because they exclude transfer payments (such as grants to state and local governments and net interest paid). (Bureau of Economic Analysis)

government-sponsored enterprises: Enterprises established and chartered by the federal government to perform specific financial functions, usually under the supervision of a government agency, but in all cases wholly owned by stockholders rather than the government. Major examples are the Federal National Mortgage Association, the Student Loan Marketing Association, and the Federal Home Loan Banks.

grants: Transfer payments from the federal government to state and local governments or other recipients to help fund projects or activities that do not involve substantial federal participation.

grants-in-aid: Grants from the federal government to state and local governments to help provide for programs of assistance or service to the public.

gross domestic product (GDP): The total market value of all goods and services produced domestically during a given period. The components of GDP are consumption, gross domestic investment, government purchases of goods and services, and net exports. (Bureau of Economic Analysis)

gross investment: A measure of additions to the capital stock that does not subtract depreciation of existing capital.

gross national product (GNP): The total market value of all goods and services produced in a given period by labor and property supplied by residents of a country, regardless of where the labor and property are located. GNP differs from GDP primarily by including the excess of capital income that residents earn from investments abroad over capital income that nonresidents earn from domestic investment.

implicit deflator: An overall measure of the price level (compared with a base period) given by the ratio of current-dollar purchases to constant-dollar purchases. Changes in an implicit deflator, unlike those in a fixed-weighted price index, reflect changes in the composition of purchases as well as in the prices of goods and services purchased. See **fixed-weighted price index** and **chain-type GDP price index**. (Bureau of Economic Analysis)

index: An indicator or summary measure that defines the overall level (compared with a base) of some aggregate--such as the general price level or total quantity--in terms of the levels of its components.

inflation: Growth in a measure of the general price level, usually expressed as an annual rate of change.

infrastructure: Government-owned capital goods that provide services to the public, usually with benefits to the community at large as well as to the direct user. Examples include schools, roads, bridges, dams, harbors, and public buildings.

inventories: Stocks of goods held by businesses either for further processing or for sale. (Bureau of Economic Analysis)

investment: *Physical investment* is the current product set aside during a given period to be used for future production; in other words, an addition to the stock of capital goods. As measured by the national income and product accounts, private domestic investment consists of investment in residential and nonresidential structures, producers' durable equipment, and the change in business inventories. *Financial investment* is the purchase of a financial security. *Investment in human capital* is spending on education, training, health services, and other activities that increase the productivity of the workforce. Investment in human capital is not treated as investment in the national income and product accounts.

labor force: The number of people who have jobs or who are available for work and are actively seeking jobs. *Labor force participation rate* is the labor force as a percentage of the noninstitutional population age 16 years or older. (BLS)

liquidating account: Any budgetary account established under credit reform to finance direct loan and loan guarantee activities that were obligated or committed before October 1, 1992 (the effective date of credit reform).

liquidity: The characteristic of an asset that permits it to be sold on short notice with little or no loss in value. Ordinarily, a shorter term to maturity or a lower risk of default will enhance an asset's liquidity.

long-term interest rate: The interest rate earned by a note or bond that matures in 10 or more years.

M2: A measure of the U.S. money supply that consists of the nonbank public's holdings of currency, traveler's checks, and checking accounts (collectively known as M1); small (less than \$100,000) time and savings accounts; money market deposit accounts held at depository institutions; most money market mutual funds; overnight repurchase agreements; and overnight Eurodollar accounts held by U.S. residents. (FRB)

mandatory spending: Another term for **direct spending**.

marginal tax rate: The tax rate that applies to an additional dollar of taxable income.

means of financing: Ways to finance federal deficits or use federal surpluses. The largest means of financing is normally federal borrowing from the public, but other means of financing include any transaction that causes a difference between the federal (including off-budget) surplus or deficit and the change in debt held by the public. The means of financing include changes in checks outstanding and Treasury cash balances, seigniorage (that is, government revenue from the manufacture of money), and the transactions of the financing accounts established under credit reform.

means-tested programs: Programs that provide cash or services to people who meet a test of need based on income and assets. Most means-tested programs are entitlements--for example, Medicaid, the Food Stamp program, Supplemental Security Income, family support, and veterans' pensions--but a few, such as subsidized housing and various social services, are funded through discretionary appropriations.

merchandise trade balance: Net exports of goods. The merchandise trade balance differs from net exports by excluding exports and imports of services. (Bureau of Economic Analysis)

monetary policy: The strategy of influencing movements of the money supply and interest rates to affect output and inflation. An "easy" monetary policy suggests faster money growth and initially lower short-term interest rates in an attempt to increase aggregate demand, but it may lead to a higher rate of inflation. A "tight" monetary policy suggests slower money growth and higher interest rates in the near term in an attempt to reduce inflationary pressure by reducing aggregate demand. The Federal Reserve System conducts monetary policy in the United States.

monetary reserves: The amount of funds that banks and other depository institutions hold as cash or as deposits with the Federal Reserve System. See **reserve requirements**.

money supply: Private assets that can readily be used to make transactions or are easily convertible into assets that can. See **M2**.

NAIRU (nonaccelerating inflation rate of unemployment): The unemployment rate consistent with a constant inflation rate. An unemployment rate greater than the NAIRU indicates downward pressure on inflation, whereas a lower unemployment rate indicates upward pressure on inflation. Estimates of the NAIRU are based on the historical relationship between inflation and the aggregate unemployment rate. CBO's procedures for estimating the NAIRU are described in Appendix B of *The Economic and Budget Outlook: An Update* (August 1994).

national income and product accounts (NIPAs): Official U.S. accounts that detail the composition of GDP and how the costs of production are distributed as income. (Bureau of Economic Analysis)

national saving: Total saving by all sectors of the economy: personal saving, business saving (corporate after-tax profits not paid as dividends), and government saving (budget surplus or deficit--indicating dissaving--of all government entities). National saving represents all income not consumed, publicly or privately, during a given period. (Bureau of Economic Analysis)

net exports: Exports of goods and services produced in a country minus its imports of goods and services produced elsewhere.

net interest: *In the federal budget*, net interest includes federal interest payments to the public as recorded in budget function 900. Net interest also includes, as an offset, interest income received by the government on loans and cash balances. *In the national income and product accounts* (NIPAs), net interest is the income component of GDP paid as interest--primarily interest that domestic businesses pay, minus interest they receive. The NIPAs treat government interest payments as transfers, so they are not part of GDP.

net national saving: National saving less depreciation of physical capital.

NIPAs: See **national income and product accounts**.

nominal: Measured in the dollar value (as in nominal output, income, or wage rate) or in market terms (as in nominal exchange or interest rate) of the period under consideration. Compare with **real**.

nonresidential structures: Primarily business buildings (such as industrial, office, and other commercial buildings) and structures (such as mining and well shafts). (Bureau of Economic Analysis)

off-budget: Spending or revenues excluded from the budget totals by law. The revenues and outlays of the two Social Security trust funds and the transactions of the Postal Service are off-budget and (except for discretionary Social Security administrative costs) are not included in any Budget Enforcement Act calculations.

offsetting receipts: Funds collected by the federal government that are recorded as negative budget authority and outlays and credited to separate receipt accounts. More than half of offsetting receipts are intragovernmental receipts that reflect agencies' payments to retirement and other funds on behalf of their employees; those receipts simply balance payments elsewhere in the budget. An additional category of receipts (proprietary receipts) come from the public and generally represent voluntary, business-type transactions. The largest items are the flat premiums for Supplementary Medical Insurance (Part B of Medicare), timber and oil lease receipts, and proceeds from the sale of electric power.

outlays: Spending to fulfill a federal obligation, generally by issuing a check or disbursing cash. Unlike outlays for other categories of spending, outlays for interest on the public debt are counted when the interest is earned, not when it is paid. Outlays may be for payment of obligations incurred in previous fiscal years or in the same year. Outlays, therefore, flow in part from unexpended balances of prior year budget authority and in part from budget authority provided for the current year.

pay-as-you-go (PAYGO): A procedure required in the Budget Enforcement Act of 1990 to ensure that, for fiscal years 1991 through 1995, legislation affecting direct spending and receipts did not increase the deficit. The pay-as-you-go process was extended through fiscal year 1998 by the Omnibus Budget Reconciliation Act of 1993. Pay-as-you-go is enforced through Congressional rules and sequestration procedures.

peak: See **business cycle**.

personal saving: Saving by households. Personal saving equals disposable personal income minus spending for consumption and interest payments. *Personal saving rate* is personal saving as a percentage of disposable personal income. (Bureau of Economic Analysis)

point-year of unemployment: An unemployment rate that is 1 percentage point above the NAIRU for one year. For example, if the unemployment rate averaged 2 percentage points above the NAIRU for one and one-half years, that would be three point-years of unemployment. See **NAIRU**.

potential real GDP: The highest level of real GDP that could persist for a substantial period without raising the rate of inflation. CBO's calculation relates potential GDP to the nonaccelerating inflation rate of unemployment, which is the unemployment rate consistent with a constant inflation rate. (CBO)

present value: A single number that expresses a flow of current and future income (or payments) in terms of an equivalent lump sum received (or paid) today. The calculation of present value depends on the rate of interest. For example, given an interest rate of 5 percent, today's 95 cents will grow to \$1 next year. Hence, the present value of \$1 payable a year from today is only 95 cents.

private saving: Saving by households and businesses. Private saving is equal to personal saving plus after-tax corporate profits minus dividends paid. (Bureau of Economic Analysis)

producers' durable equipment: Primarily nonresidential capital equipment--such as computers, machines, and transportation equipment--owned by businesses. (Bureau of Economic Analysis)

productivity: Average real output per unit of input. *Labor productivity* is average real output per hour of labor. The growth of labor productivity is defined as the growth of real output that is not explained by the growth of labor input alone. *Total factor productivity* is average real output per unit of combined labor and capital inputs. The growth of total factor productivity is defined as the growth of real output that is not explained by the growth of labor and capital. Labor productivity and total factor productivity differ in that increases in capital per worker would raise labor productivity but not total factor productivity. (BLS)

program account: Any budgetary account that finances credit subsidies and the costs of administering credit programs.

real: Adjusted to remove the effects of inflation. *Real (constant-dollar) output* represents volume, rather than dollar value, of goods and services. *Real income* represents power to purchase real output. *Real data* are usually constructed by dividing the corresponding nominal data, such as output or a wage rate, by a price index or deflator. *Real interest rate* is a nominal interest rate minus the expected inflation rate. Compare with **nominal**.

receipt account: Any budget or off-budget account that is established exclusively to record the collection of income, including negative subsidies. In general, receipt accounts that collect money arising from the exercise of the government's sovereign powers are included as revenues, whereas the proceeds of intragovernmental transactions or collections from the public arising from business-type transactions (such as interest income, proceeds from the sale of property or products, or profits from federal credit activities) are included as offsetting receipts--that is, credited as offsets to outlays rather than included in receipts.

recession: A phase of the business cycle extending from a peak to the next trough--usually lasting six months to a year--and characterized by widespread declines in output, income, employment, and trade in many sectors of the economy. Real GDP usually falls throughout a recession. See **business cycle**. (NBER)

reconciliation: A process the Congress uses to make its tax and spending legislation conform with the targets established in the budget resolution. The budget resolution may contain reconciliation instructions directing certain Congressional committees to achieve deficit reduction through changes in tax or spending programs under their jurisdiction. Legislation to implement the reconciliation instructions is usually combined in one comprehensive bill. The reconciliation process primarily affects taxes, entitlement spending, and offsetting receipts. As a general rule, decisions on discretionary programs are determined separately through the appropriation process, which is also governed by allocations in the budget resolution.

recovery: A phase of the business cycle that lasts from a trough until overall economic activity returns to the level it reached at the previous peak. See **business cycle**. (NBER)

reserve requirements: The amount of funds that banks and other depository institutions must hold as cash or as deposits with the Federal Reserve System. The Federal Reserve specifies reserve requirements depending on the level of deposits. Such requirements reduce the risk of bank failure and allow the Federal Reserve to influence the money supply. (FRB)

reserves: See **monetary reserves**.

residential investment: Investment in housing, primarily for construction of new single-family and multifamily housing and alterations plus additions to existing housing. (Bureau of Economic Analysis)

retained earnings: Corporate profits after tax that are used for investment rather than paid out as dividends to stockholders. (Bureau of Economic Analysis)

revenues: Funds collected from the public arising from the sovereign power of the government. Revenues consist of receipts from income taxes (individual and corporate), excise taxes, and estate and gift taxes; social insurance contributions; customs duties; miscellaneous receipts such as Federal Reserve earnings, gifts, and contributions; and fees and fines. Revenues are also known as federal governmental receipts but do not include offsetting receipts, which are recorded as negative budget authority and outlays.

sequestration: The cancellation of budgetary resources to enforce the discretionary spending caps and pay-as-you-go process established under the Budget Enforcement Act of 1990 and the Omnibus Budget Reconciliation Act of 1993. Sequestration is triggered if the Office of Management and Budget determines that discretionary appropriations exceed the discretionary spending caps or that legislation affecting direct spending and receipts increases the deficit. Changes in direct spending and receipt legislation that increase the deficit would result in reductions in funding for entitlements not otherwise exempted by law. Discretionary spending in excess of the caps would cause the cancellation of budgetary resources within the discretionary spending category.

short-term interest rate: The interest rate earned by a debt instrument that will mature within one year.

standardized-employment deficit: The level of the federal budget deficit that would occur under current law if the economy was operating at potential GDP. It provides a measure of underlying fiscal policy by removing the influence of cyclical factors from the budget deficit. Compare with **cyclical deficit**. (CBO)

structural deficit: Same as **standardized-employment deficit**.

supply shock: A large and unexpected change in the production of a good or service. Examples include bumper crops, crop failures, or sudden restrictions on the supply of oil as occurred in 1973-1974 and 1979-1980. A supply shock that restricts output will raise the price of the good in short supply; a surfeit will lower the price of the good.

ten-year Treasury note: Interest-bearing note issued by the U.S. Treasury that is redeemed in 10 years.

three-month Treasury bill: Security issued by the U.S. Treasury that is redeemed in 91 days.

thrift institutions: Savings and loan institutions and mutual savings banks.

total factor productivity: See **productivity**.

transfer payments: Payments in return for which no good or service is currently received--for example, welfare or Social Security payments or money sent to relatives abroad. (Bureau of Economic Analysis)

trough: See **business cycle**.

trust fund: A fund, designated as a trust fund by statute, that is credited with income from earmarked collections and charged with certain outlays. Collections may come from the public (for example, taxes or user charges) or from intrabudgetary transfers. More than 150 federal government trust funds exist, of which the largest and best known finance several major benefit programs (including Social Security and Medicare) and certain infrastructure spending (the Highway and the Airport and Airway trust funds). The term "federal funds" refers to all programs that are not trust funds.

underlying rate of inflation: Rate of inflation of a modified CPI-U that excludes from the market basket the components most volatile in price--food, energy, and used cars.

unemployment: Joblessness. The measure of unemployment is the number of jobless people who are available for work and are actively seeking jobs. The *unemployment rate* is unemployment as a percentage of the labor force. (BLS)

yield: The average annual rate of return on a security, including interest payments and repayment of principal, if held to maturity.

yield curve: The relationship formed by plotting the yields of otherwise comparable fixed-income securities against their terms of maturity. Typically, yields increase as maturities lengthen. The rate of this increase determines the "steepness" or "flatness" of the yield curve. Ordinarily a steepening (or flattening) of the yield curve is taken to suggest that relatively short-term interest rates are expected to be higher (or lower) in the future than they are now.